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July 15, 2005

Ms. Joan Fleck  
California Regional Water Quality Control Board  
North Coast Region  
5550 Skylane Blvd., Suite A  
Santa Rosa, California 95403

Subject:           **Second Quarter 2005 Groundwater Monitoring Report**  
Former Dave's Pit Stop #1  
164 Calistoga Road, Santa Rosa, California  
Apex Project No. ERA02.028

Dear Ms Fleck:

Apex Envirotech, Inc. (Apex), has been authorized by Dave's Pit Stop (Pit Stop) to provide this report documenting the results of groundwater monitoring. This report covers site activities for the second quarter groundwater sampling event conducted on May 20, 2005. Groundwater monitoring results are provided in the attached figures and tables. Apex standard operating procedures, field data, and analytical results are provided as attachments.

This report is based in part on information obtained by Apex from Pit Stop, and is subject to modification as newly acquired information may warrant.

## **BACKGROUND**

The site is located approximately 500 feet north of the intersection of California Highway 12 and Calistoga Road in the City of Santa Rosa, California. Facilities at this location currently house an automobile repair shop. The site was formerly used as a retail gasoline service station.

1989 - One 550-gallon used-oil underground storage tank (UST) and associated piping were excavated and removed from the site. Soil samples collected from beneath the tank contained detectable concentrations of petroleum hydrocarbons.

June 1990 - Subsurface investigation began at the site.

1996 - Four shallow groundwater monitoring wells existed on the site (MW-1 through MW-4).

February 1999 - One 6,000 and two 10,000-gallon gasoline USTs and two fuel dispenser islands were excavated and removed from the site. Approximately 1,003 tons of petroleum hydrocarbon contaminated soil was over excavated from the UST pit. Following removal, this material was transported off-site for disposal. A total of 70,000 gallons of hydrocarbon contaminated groundwater was removed from the UST pit to facilitate UST removal, over excavation, and backfilling activities at the site. The UST pit was closed with clean imported fill. The site does not currently possess fueling capabilities or equipment.

June 21, 2001 - The North Coast Regional Water Quality Control Board (NCRWQCB) issued a letter requesting a sensitive receptor survey including a 1,000 foot door to door survey and MTBE plume vertical and horizontal definition.

January 3, 2002 - Apex personnel supervised the installation of groundwater monitoring well MW-5 and the installation of three deep wells (DW-1 through DW-3).

November 2002 - Apex was retained as the site environmental consultant.

September 29, 2003 - Apex personnel conducted a well search with the Department of Water Resources and on October 1, 2003, conducted a door-to-door survey within 1,000 feet of the site. Seventeen wells were identified. Results are documented in a report titled, *Sensitive Receptor Survey*, dated November 12, 2003.

December 9, 2004 - The NCRWQCB issued a letter requesting a workplan be prepared addressing the remaining groundwater and surface water impacts, as well as a request to sample the domestic well at 184 Calistoga Road. The domestic well sampling results were below detection limits.

February 21, 2005 - Apex submitted a workplan titled, *Workplan for the Installation of Ozone Sparge Remediation System*, proposing the installation of six sparge points and KVA C-Sparge system to address remaining groundwater contamination.

May 11, 2005 - The NCRWQCB issued a letter approving the workplan with recommendations to increase the depth of the sparge points to beyond 40 feet bgs, and determine baseline parameters for dissolved oxygen, ORP, temperature, pH, bromide, bromate, dissolved hexavalent, dissolved chromium, dissolved vanadium, dissolved selenium and dissolved molybdenum. In addition, Apex has been directed to distribute a public notice regarding the proposed corrective action.

## GENERAL SITE INFORMATION

**Site name:** Former Dave's Pit Stop #1  
**Site address:** 164 Calistoga Road, Santa Rosa, California  
**Current property owner:** Mr. Dave Zedrick  
**Current site use:** None  
**Current phase of project:** Groundwater monitoring  
**Tanks at site:** None  
**Number of wells:** 8 monitoring wells (5 shallow, 3 deep)

## GROUNDWATER MONITORING SUMMARY

**Gauging and sampling date:** May 20, 2005  
**Wells gauged and sampled:** MW-1, MW-2R, MW-3, MW-4, MW-5, DW-1, DW-2 and DW-3  
**Wells gauged only:** None  
**Wells sampled only:** None  
**Groundwater flow direction:** Shallow: Northwest, Deep: East  
**Groundwater gradient:** Shallow: 0.012 ft/ft; Deep: 0.10 ft/ft  
**Surface water samples:** US, MS, DS  
**Floating liquid hydrocarbons:** None  
**Laboratory:** Kiff Analytical, Davis, California

### Analysis Performed:

Analysis	Abbreviation	Designation	USEPA Method No.
Total Petroleum Hydrocarbons as Gasoline	TPHg	Fuel-Range Hydrocarbons	8260B
Benzene	BTEX	Aromatic Volatile Organics	
Toluene			
Ethylbenzene			
Xylenes (Total)			
Methyl Tertiary Butyl Ether	MTBE	Fuel Oxygenate	

### Modifications from Standard Monitoring Program:

None

## CONCLUSIONS

Groundwater analytical results indicate petroleum hydrocarbon concentrations are centered at well MW-1. Wells MW-2R, MW-3 and MW-4 contained concentrations of TPHg and MTBE only. Well MW-5 contained concentrations of toluene and MTBE above laboratory detection

limits. Concentrations of MTBE were detected at all shallow zone wells and deep zone well DW-1. Deep zone wells DW-2 and DW-3 were non detect for all analyzed constituents. The creek samples collected were below laboratory detection limits for all analyzed constituents.

Groundwater isoconcentration maps depict the hydrocarbon plume at the site.

Shallow zone groundwater elevations increased 0.36 feet this quarter compared with the last sampling event.

Overall concentrations of hydrocarbons at the site have been decreasing, and are illustrated in the concentration versus time trend plots attached.

## **RECOMMENDATIONS**

Groundwater monitoring and creek sampling should continue on a quarterly basis. The next sampling event is scheduled for August 2005.

## **ADDITIONAL ACTIVITIES PERFORMED AT SITE**

None

## **ATTACHMENTS:**

- Figure 1: Site Vicinity Map
- Figure 2: Site Plan Map
- Figure 3: Shallow Zone Groundwater Contour Map: May 20, 2005
- Figure 4: Deep Zone Groundwater Contour Map: May 20, 2005
- Figure 5: Shallow Zone TPHg in Groundwater Isoconcentration Map: May 20, 2005
- Figure 6: Shallow Zone MTBE in Groundwater Isoconcentration Map: May 20, 2005
- Figure 7: Deep Zone MTBE in Groundwater Isoconcentration Map: May 20, 2005

- Table 1: Well Construction Details
- Table 2: Groundwater Elevation Data
- Table 3: Groundwater Analytical Data
- Table 4: Historical Groundwater Elevation Data
- Table 5: Historical Groundwater Analytical Data

- Appendix A: Apex Standard Operating Procedures
- Appendix B: Field Data Sheets
- Appendix C: Laboratory Analytical Report and Chain-of-Custody Form
- Appendix D: Concentration versus Time Trends

## REPORT DISTRIBUTION

Apex submitted this report, in its final form, to the following:

Regulatory Oversight: Ms. Joan Fleck  
California Regional Water Quality Control Board  
North Coast Region  
5550 Skylane Blvd., Suite A  
Santa Rosa, California 95403  
(707) 576-2675

Mr. Bob Mackentyre  
Santa Rosa Fire Department  
955 Sonoma Avenue  
Santa Rosa, California 95404  
(707) 543-3500

Responsible Party: Mr. Dave Zedrick  
Dave's Pit Stop  
P.O. Box 7010  
Santa Rosa, California 95407  
(707) 528-3677

## REMARKS/SIGNATURES

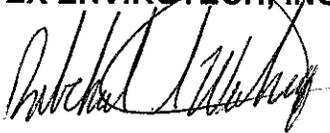
The information contained in this report reflects our professional opinions and was developed in accordance with currently available information, and accepted hydrogeologic and engineering practices.

The work described in the above report was performed under the direct supervision of a professional geologist, registered with the State of California, whose signature appears below.

We appreciate the opportunity to provide Pit Stop with geologic, engineering, and environmental consulting services, and trust this report meets your needs. If you have any questions or comments, please call us at (916) 851-0174.

Sincerely,

**APEX ENVIROTECH, INC.**



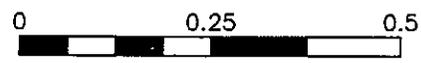
Rebekah A. Westrup  
Project Manager



Michael S. Sgourakis, R.G.  
Senior Geologist  
CRG No. 7194



## FIGURES



Approximate Scale  
1 inch = 0.25 miles



	DRAWN BY: D. Alston DATE: 1/27/03	<b>SITE VICINITY MAP</b>	FIGURE <b>1</b>
	REVISIONS		Former Dave's Pit Stop No. 1 164 Calistoga Road Santa Rosa, California

Footpath

Creek Greenbelt

CALISTOGA ROAD

184 Calistoga Road

Residence

Garage

Austin Creek

Driveway

HYD-5a

HYD-5b

MW-4

Austin Creek

DW-2

HYD-3a

MW-5

MW-2R

Former Used Oil Tank

HYD-6a

MW-3

Former Dispenser Islands

DW-3

HYD-1a

Service Center

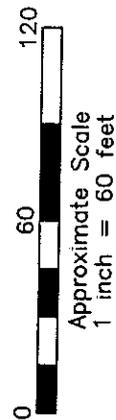
140 Calistoga Road

Driveway

St. Francis Shopping Center

**LEGEND**

- Hydropunch Boring Location (November 17, 1995)
- ⊕ Monitoring Well Location
- ⊗ Destroyed Monitoring Well Location
- ⊗ Deep Monitoring Well Location
- Limits Of Excavation



DRAWN BY:	D. Alston
DATE:	1/27/03
REVISIONS	



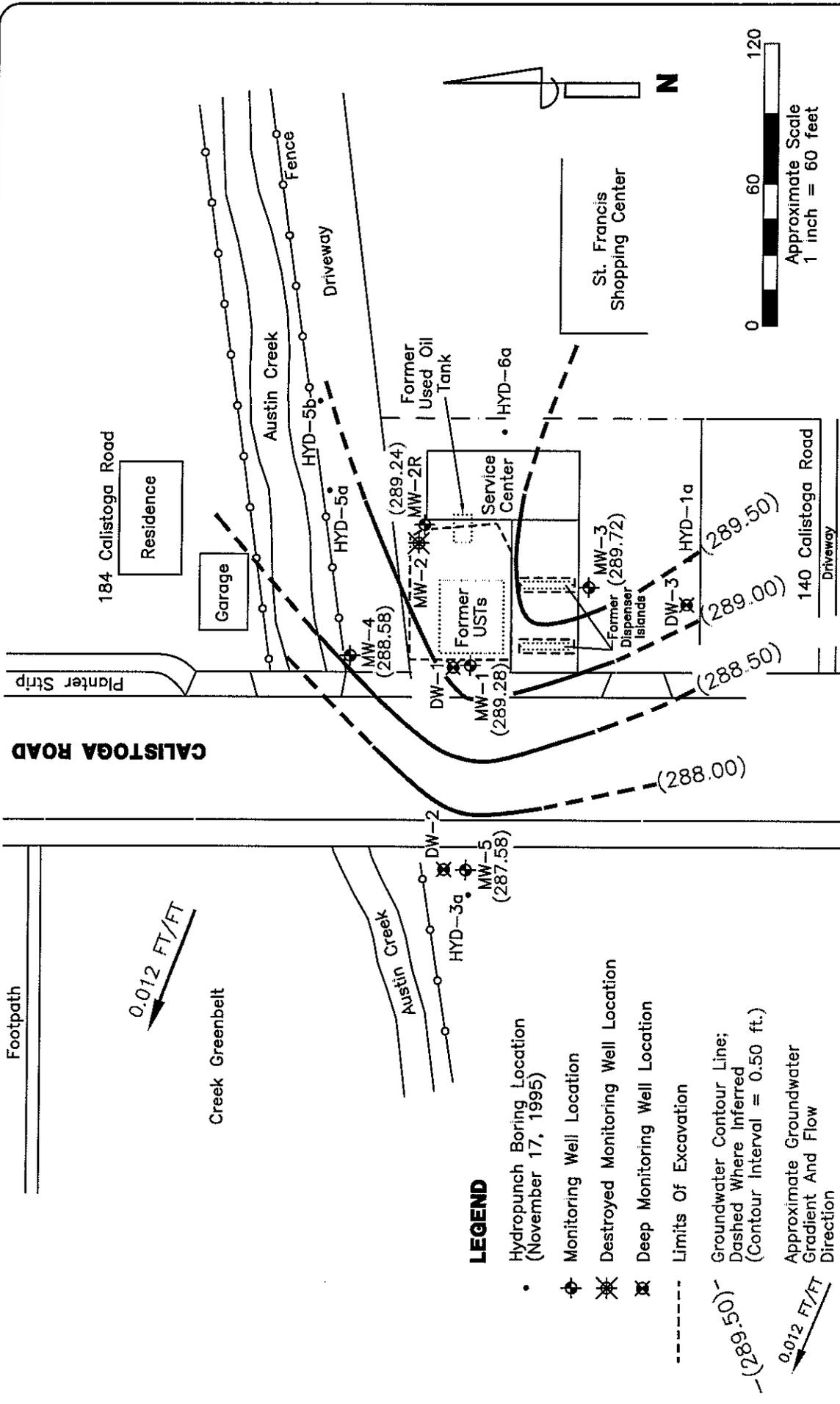
**SITE PLAN MAP**

Former Dave's Pit Stop No. 1  
164 Calistoga Road  
Santa Rosa, California

FIGURE

**2**

PROJECT NUMBER:  
ERA02.028



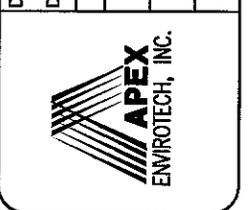
**SHALLOW-ZONE GROUNDWATER CONTOUR MAP, MAY 20, 2005**

**FIGURE 3**

PROJECT NUMBER: ERA02.028

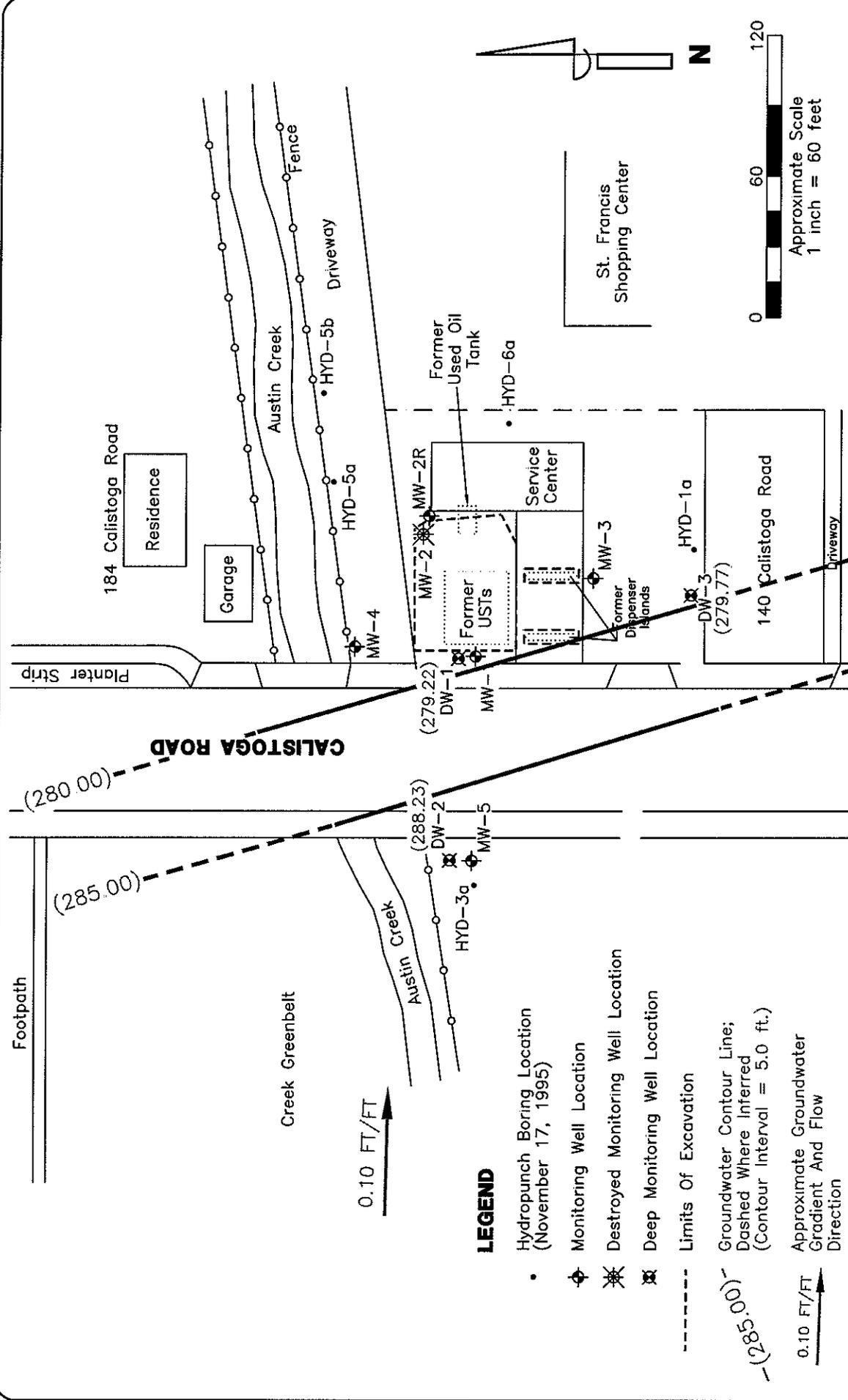
Former Dave's Pit Stop No. 1  
 164 Calistoga Road  
 Santa Rosa, California

DRAWN BY:	J. Curry
DATE:	06/15/05
REVISIONS	



**LEGEND**

- Hydropunch Boring Location (November 17, 1995)
- ⊕ Monitoring Well Location
- ⊗ Destroyed Monitoring Well Location
- ⊗ Deep Monitoring Well Location
- Limits Of Excavation
- Groundwater Contour Line; Dashed Where Inferred (Contour Interval = 0.50 ft.)
- ↘ Approximate Groundwater Gradient And Flow Direction



**LEGEND**

- Hydropunch Boring Location (November 17, 1995)
- ⊕ Monitoring Well Location
- ⊗ Destroyed Monitoring Well Location
- ⊘ Deep Monitoring Well Location
- Limits Of Excavation
- Groundwater Contour Line; Dashed Where Inferred (Contour Interval = 5.0 ft.)
- 0.10 FT/FT Approximate Groundwater Gradient And Flow Direction

**DEEP-ZONE GROUNDWATER CONTOUR**  
**MAP, MAY 20, 2005**

Former Dave's Pit Stop No. 1  
164 Calistoga Road  
Santa Rosa, California

**FIGURE**  
**4**

PROJECT NUMBER:  
ERA02-028

DRAWN BY:	J. Curry
DATE:	06/15/05
REVISIONS	

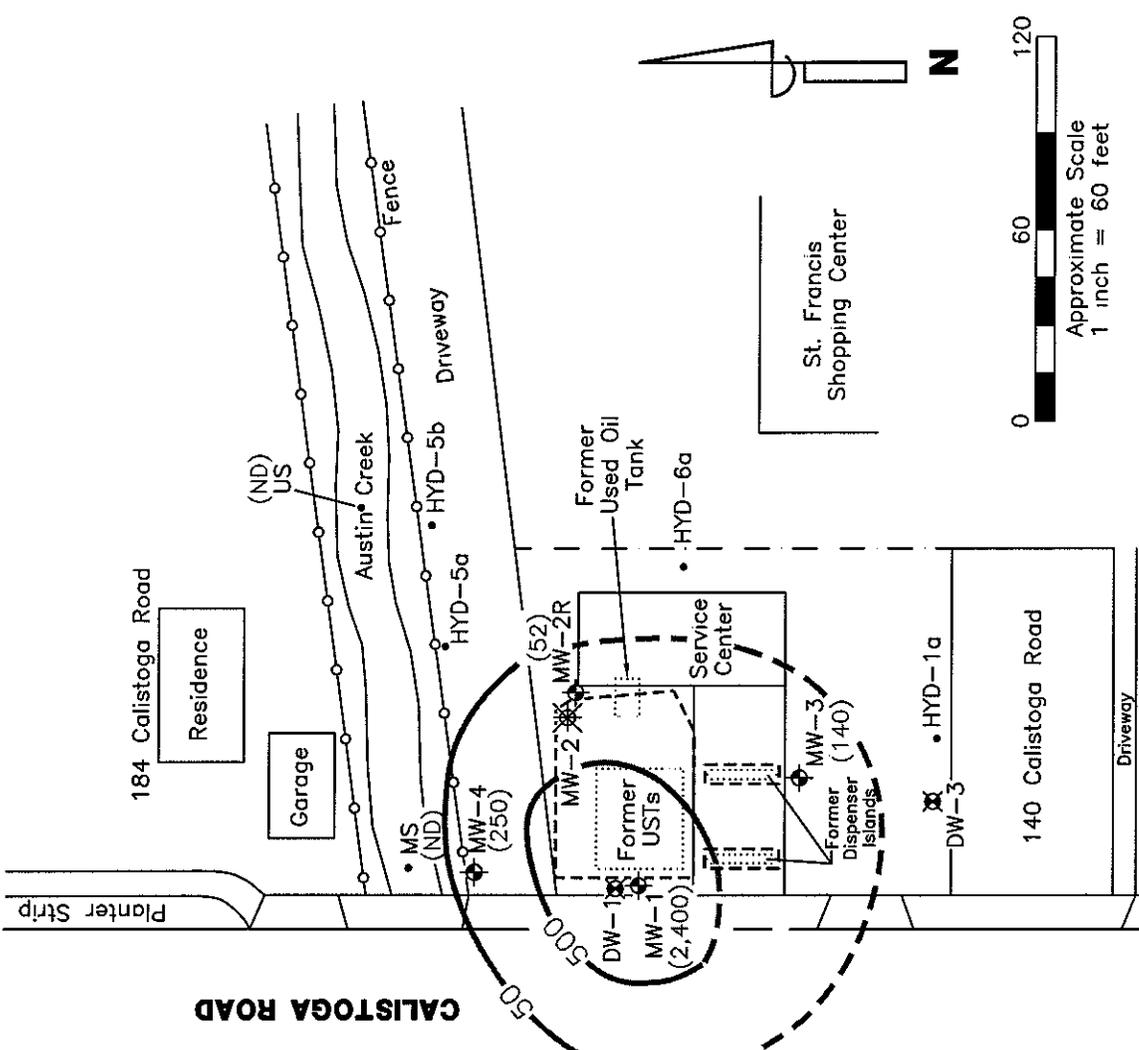
Footpath

Creek Greenbelt

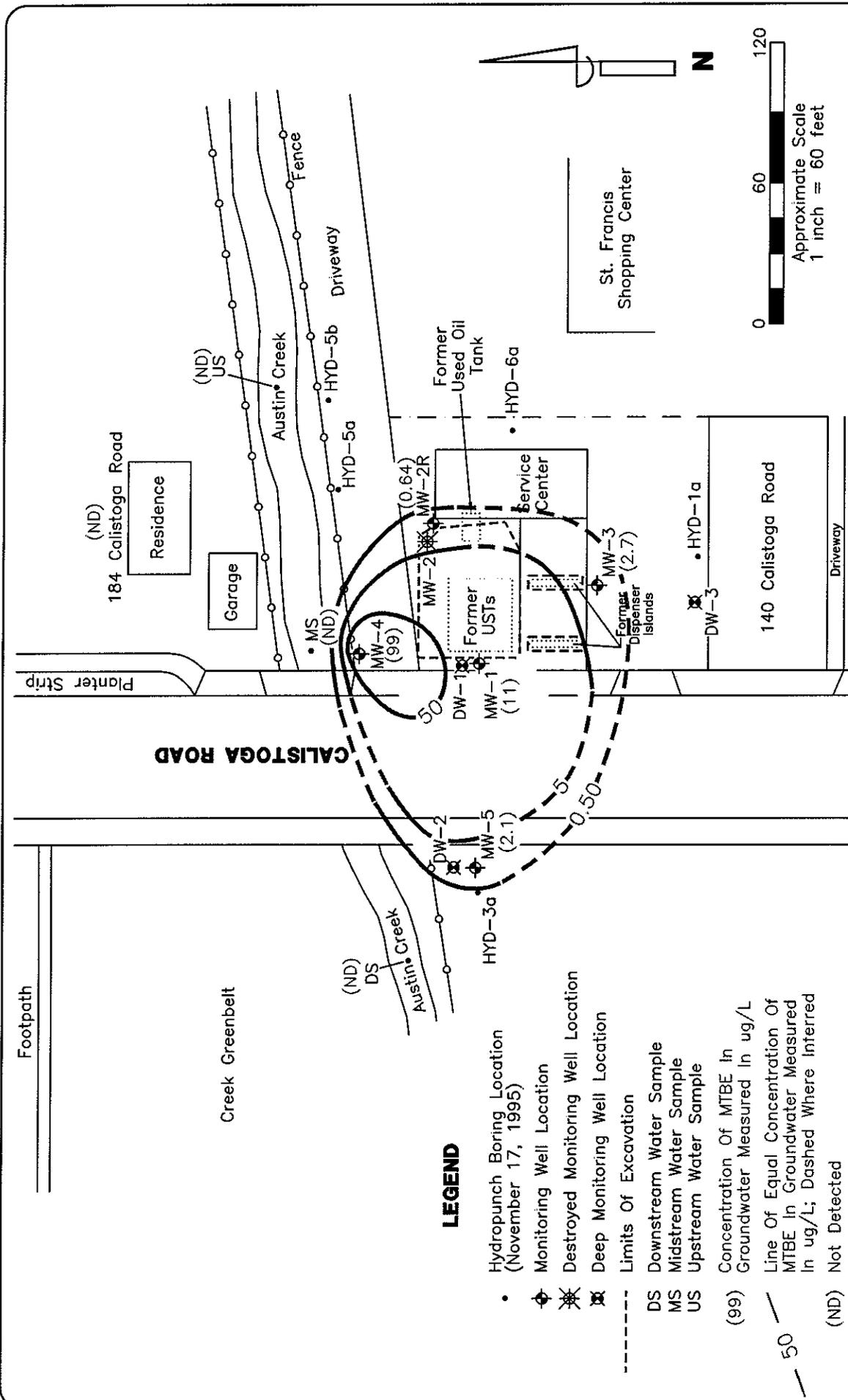
(ND)  
DS  
Austin Creek

**LEGEND**

- Hydropunch Boring Location (November 17, 1995)
- ◆ Monitoring Well Location
- ⊗ Destroyed Monitoring Well Location
- ⊗ Deep Monitoring Well Location
- Limits Of Excavation
- DS Downstream Water Sample
- MS Midstream Water Sample
- US Upstream Water Sample
- (2,400) Concentration Of TPHg In Groundwater Measured In ug/L
- 500— Line Of Equal Concentration Of TPHg In Groundwater Measured In ug/L; Dashed Where Inferred
- (ND) Not Detected



	DRAWN BY: J. Curry DATE: 06/15/05	<b>SHALLOW-ZONE TPHg IN GROUNDWATER ISOCONCENTRATION MAP, MAY 20, 2005</b>		<b>FIGURE 5</b>
	REVISIONS	Former Dave's Pit Stop No. 1 164 Calistoga Road Santa Rosa, California		PROJECT NUMBER: ERA02.028



**LEGEND**

- Hydropunch Boring Location (November 17, 1995)
- ◆ Monitoring Well Location
- ⊗ Destroyed Monitoring Well Location
- ⊗ Deep Monitoring Well Location
- Limits Of Excavation
- DS Downstream Water Sample
- MS Midstream Water Sample
- US Upstream Water Sample
- (99) Concentration Of MTBE In Groundwater Measured In ug/L
- Line Of Equal Concentration Of MTBE In Groundwater Measured In ug/L; Dashed Where Interfered
- (ND) Not Detected

**FIGURE 6**

**SHALLOW-ZONE MTBE IN GROUNDWATER ISOCENTRATION MAP, MAY 20, 2005**

Former Dave's Pit Stop No. 1  
164 Calistoga Road  
Santa Rosa, California

PROJECT NUMBER:  
ERA02.028

DRAWN BY: J. Curry  
DATE: 06/15/05

REVISIONS

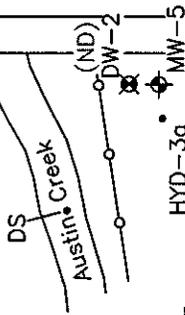
St. Francis Shopping Center

Approximate Scale  
1 inch = 60 feet

0 60 120

Footpath

Creek Greenbelt



**LEGEND**

- Hydropunch Boring Location (November 17, 1995)
- ◊ Monitoring Well Location
- ✖ Destroyed Monitoring Well Location
- ◻ Deep Monitoring Well Location
- Limits Of Excavation
- DS Downstream Water Sample
- MS Midstream Water Sample
- US Upstream Water Sample
- (29) Concentration Of MTBE In Groundwater Measured In ug/L
- Line Of Equal Concentration Of MTBE In Groundwater Measured In ug/L; Dashed Where Inferred
- (ND) Not Detected

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**CALISTOGA ROAD**

Planter Strip

184 Calistoga Road

Residence

Garage

US

Austin Creek

Fence

Driveway

• HYD-5b

• HYD-5a

• MS

MW-4

Former Used Oil Tank

• HYD-6a

MW-2

MW-2R

Service Center

Former USTs

MW-1

MW-3

Former Dispenser Islands

• HYD-1a

DW-3 (ND)

140 Calistoga Road

Driveway

St. Francis Shopping Center



DRAWN BY: J. Curry  
 DATE: 06/15/05  
 REVISIONS



**DEEP-ZONE MTBE IN GROUNDWATER ISOCONCENTRATION MAP, MAY 20, 2005**

FIGURE  
**7**

Former Dave's Pit Stop No. 1  
 164 Calistoga Road  
 Santa Rosa, California

PROJECT NUMBER:

ERA02.028

## **TABLES**

**TABLE 1**  
**WELL CONSTRUCTION DETAILS**  
Former Dave's Pit Stop #1  
164 Calistoga Road  
Santa Rosa, California

Well Number	Well Installation Date	*Elevation TOC (feet)	Casing Material	Total Depth (feet)	Well Depth (feet)	Casing Diameter (inches)	Screened Interval (feet)	Filter Pack Interval (feet)
MW-1	6/13/1990	292.66	PVC	21	21	4	6 - 21	5 - 21
MW-2	6/13/1990	293.22	PVC	---	---	---	---	---
MW-2R	10/1/1999	293.12	PVC	18.5	18.5	2	4 - 18.5	3 - 18.5
MW-3	6/13/1990	293.59	PVC	21	21	4	6 - 21	5 - 21
MW-4	1/11/1996	292.70	PVC	20	20	2	5 - 20	4 - 20
MW-5	1/3/2002	291.00	PVC	18	18	2	3 - 18	2 - 18
DW-1	1/3/2002	292.82	PVC	40	40	2	35 - 40	34 - 40
DW-2	1/3/2002	291.15	PVC	40	40	2	35 - 40	34 - 40
DW-3	1/3/2002	293.20	PVC	40	40	2	35 - 40	34 - 40

Notes:

\* Information reported by Clearwater Group, Inc. entitled *Additional Site Assessment Report*, Jan. 29, 2002.

MW-2 = Destroyed by overexcavation activities (Feb 1999). Replaced by MW-2R

--- = No data found in available reports

TOC = Top of Casing

PVC = Polyvinyl Chloride

DW = Deep Well

**TABLE 2**  
**GROUNDWATER ELEVATION DATA**

Former Dave's Pit Stop No.1  
164 Calistoga Road  
Santa Rosa, California  
(all measurements are in feet)

<b>Monitoring Well</b>	<b>Date</b>	<b>Reference Elevation (top of Casing)</b>	<b>Depth to Groundwater</b>	<b>Groundwater Elevation</b>
MW-1	5/20/05	292.66	3.38	289.28
MW-2R	5/20/05	293.12	3.88	289.24
MW-3	5/20/05	293.53	3.81	289.72
MW-4	5/20/05	292.70	4.12	288.58
MW-5	5/20/05	291.00	3.42	287.58
DW-1	5/20/05	292.82	13.60	279.22
DW-2	5/20/05	291.15	2.92	288.23
DW-3	5/20/05	293.20	13.43	279.77

**TABLE 3  
GROUNDWATER ANALYTICAL DATA**

Former Dave's Pit Stop No.1  
164 Calistoga Road  
Santa Rosa, California

Monitoring Well	Date Collected	TPH as Gasoline (ug/L)	Aromatic Volatile Organics				MTBE (8260) (ug/L)
			Benzene (ug/L)	Toluene (ug/L)	Ethyl-benzene (ug/L)	Total Xylenes (ug/L)	
MW-1	5/20/05	2400	<0.50	0.72	9.8	0.56	11
MW-2R	5/20/05	52*	<0.50	<0.50	<0.50	<0.50	0.64
MW-3	5/20/05	140*	<0.50	<0.50	<0.50	<0.50	2.7
MW-4	5/20/05	250*	<0.50	<0.50	<0.50	<0.50	99
MW-5	5/20/05	<50	<0.50	3.2	<0.50	<0.50	2.1
DW-1	5/20/05	<50	<0.50	<0.50	<0.50	<0.50	29
DW-2	5/20/05	<50	<0.50	<0.50	<0.50	<0.50	<0.50
DW-3	5/20/05	<50	<0.50	<0.50	<0.50	<0.50	<0.50
Creek-DS	5/20/05	<50	<0.50	<0.50	<0.50	<0.50	<0.50
Creek-MS	5/20/05	<50	<0.50	<0.50	<0.50	<0.50	<0.50
Creek-US	5/20/05	<50	<0.50	<0.50	<0.50	<0.50	<0.50

NOTES:

TPH - Total Petroleum Hydrocarbons  
 MTBE - Methyl Tertiary Butyl Ether  
 --- -Not analyzed  
 ug/L - micrograms per Liter

< -below laboratory detection limits  
 \*TPH as gasoline does not exhibit a typical Gasoline chromatographic pattern for sample

**TABLE 4  
HISTORICAL GROUNDWATER ELEVATION DATA**

Former Dave's Pit Stop #1  
164 Calisotga Road  
Santa Rosa, California  
(All measurements are in feet)

Monitoring Well	Date	Reference Elevation (top of casing)	Depth to Groundwater	Groundwater Elevation	
MW-1	6/13/90	99.64	7.21	92.43	
	11/14/90	---	---	---	
	4/2/91	---	---	---	
	8/1/91	---	---	---	
	1/22/92	292.73	5.20	287.53	
	9/14/92		8.17	284.56	
	12/16/92		4.77	287.96	
	3/9/93		3.94	288.79	
	7/14/93		5.83	286.90	
	9/23/93		8.34	284.39	
	12/15/93		4.56	288.17	
	1/11/96		5.05	287.68	
	7/12/96		6.62	286.11	
	1/7/97		3.55	289.18	
	7/28/97		7.73	285.00	
	2/9/98		2.30	290.43	
	7/30/98		5.81	286.92	
	3/16/99		5.38	287.35	
	6/15/99	well box damage			
	10/1/99	292.66	7.73	284.93	
	11/23/99		5.19	287.47	
	2/16/00		2.30	290.36	
	5/10/00		4.60	288.06	
	7/11/00		6.03	286.63	
	10/6/00		7.08	285.58	
	3/29/01		4.66	288.00	
	10/8/02		7.88	284.78	
	1/3/02		2.24	290.42	
	5/6/02		5.00	287.66	
	12/19/02		---	---	
	2/27/03		4.35	288.31	
	6/24/03		5.36	287.30	
	9/10/03		6.81	285.85	
	12/17/03		blocked		
2/19/04		2.46	290.20		
5/25/04		5.62	287.04		
8/12/04		7.56	285.10		
11/18/04		5.31	287.35		
2/25/05		3.91	288.75		
5/20/05		3.38	289.28		
MW-2	6/13/90	100.10	7.65	92.45	
	11/14/90	---	---	---	
	4/2/91	---	---	---	
	8/1/91	---	---	---	
	1/22/92	293.20	5.69	287.51	
	9/14/92		8.57	284.63	
	12/16/92		5.16	288.04	
	3/9/93		4.56	288.64	
	7/14/93		6.69	286.51	
	9/23/93		8.77	284.43	
	12/15/93		5.00	288.20	
	1/11/96		5.51	287.69	
	7/12/96		7.07	286.13	
	1/7/97		4.10	289.10	
	7/28/97		8.12	285.08	
	2/9/98		2.86	290.34	
	7/30/98		6.06	287.14	
		well destroyed			

**TABLE 4  
HISTORICAL GROUNDWATER ELEVATION DATA**

Former Dave's Pit Stop #1  
164 Calisotga Road  
Santa Rosa, California  
(All measurements are in feet)

Monitoring Well	Date	Reference Elevation (top of casing)	Depth to Groundwater	Groundwater Elevation
MW-2R	10/1/99	293.12	8.02	285.10
	11/23/99		5.41	287.71
	2/16/00		3.07	290.05
	5/10/00		4.93	288.19
	7/11/00		6.15	286.97
	10/6/00		7.20	285.92
	3/29/01		4.97	288.15
	10/8/02		7.99	285.13
	1/3/02		2.78	290.34
	5/6/02		5.24	287.88
	12/19/02		3.66	289.46
	2/27/03		4.73	288.39
	6/24/03		5.53	287.59
	9/10/03		6.92	286.20
	12/17/03		4.56	288.56
	2/19/04		3.03	290.09
	5/25/04		6.72	286.40
	8/12/04		7.71	285.41
	11/18/04		5.43	287.69
	2/25/05		4.29	288.83
5/20/05	3.88	289.24		
MW-3	6/13/90	100.44	7.85	92.59
	11/14/90	---	---	---
	4/2/91	---	---	---
	8/1/91	---	---	---
	1/22/92	293.53	5.80	287.73
	9/14/92		8.74	284.79
	12/16/92		5.12	288.41
	3/9/93		4.38	289.15
	7/14/93		6.79	286.74
	9/23/93		8.92	284.61
	12/15/93		4.95	288.58
	1/11/96		5.67	287.86
	7/12/96		7.08	286.45
	1/7/97		4.02	289.51
	7/28/97		8.20	285.33
	2/9/98		2.79	290.74
	7/30/98		6.21	287.32
	3/16/99		5.78	287.75
	6/15/99		6.05	287.48
	10/1/99		8.18	285.35
	11/23/99		5.87	287.66
	2/16/00		2.89	290.64
	5/10/00		5.11	288.42
	7/11/00		6.43	287.10
	10/6/00		7.20	286.33
	3/29/01		5.15	288.38
	10/8/02		8.26	285.27
	1/3/02		2.82	290.71
	5/6/02		5.57	287.96
	12/19/02		3.51	290.02
	2/27/03		4.78	288.75
	6/24/03		5.84	287.69
9/10/03		7.19	286.34	
12/17/03		4.73	288.80	
2/19/04		2.88	290.65	
5/25/04		6.02	287.51	
8/12/04		7.94	285.59	
11/18/04		5.98	287.55	
2/25/05		4.16	289.37	
5/20/05		3.81	289.72	

**TABLE 4  
HISTORICAL GROUNDWATER ELEVATION DATA**

Former Dave's Pit Stop #1  
164 Calisotga Road  
Santa Rosa, California  
(All measurements are in feet)

Monitoring Well	Date	Reference Elevation (top of casing)	Depth to Groundwater	Groundwater Elevation
MW-4	1/11/96	292 70	5 05	287 65
	7/12/96		6 84	285 86
	1/7/97		3 78	288 92
	7/28/97		7 89	284 81
	2/9/98		0 27	292 43
	7/30/98		4 96	287 74
	3/16/99		4 54	288 16
	6/15/99		5 70	287 00
	10/1/99		7 97	284 73
	11/23/99		5 23	287 47
	2/16/00		2 82	289 88
	5/10/00		4 72	287 98
	7/11/00		6 08	286 62
	10/6/00		7 37	285 33
	3/29/01		4 83	287 87
	10/8/02		8 02	284 68
	1/3/02		3 29	289 41
	5/6/02		5 11	287 59
	12/19/02		2 79	289 91
	2/27/03		4 69	288 01
	6/24/03		5 50	287 20
	9/10/03		6 95	285 75
	12/17/03		4 59	288 11
	2/19/04		3 62	289 08
	5/25/04		5 69	287 01
	8/12/04		7 69	285 01
11/18/04	5 26	287 44		
2/25/05	4 44	288 26		
5/20/05	4 12	288 58		
MW-5	1/3/02	291 00	1 92	289 08
	5/6/02		4 60	286 40
	12/19/02		2 50	288 50
	2/27/03		3 69	287 31
	6/24/03		4 84	286 16
	9/10/03		6 53	284 47
	12/17/03		blocked	
	2/19/04		2 03	288 97
	5/25/04		5 09	285 91
	8/12/04		7 90	283 10
	11/18/04		5 72	285 28
	2/25/05		3 63	287 37
	5/20/05		3 42	287 58
DW-1	1/3/02	292 82	0 30	292 52
	5/6/02		6 11	286 71
	12/19/02		3 88	288 94
	2/27/03		6 27	286 55
	6/24/03		20 52	272 30
	9/10/03		7 80	285 02
	12/17/03		4 97	287 85
	2/19/04		4 04	288 78
	5/25/04		6 43	286 39
	8/12/04		7 91	284 91
	11/18/04		14 35	278 47
	2/25/05		14 62	278 20
	5/20/05		13 60	279 22

**TABLE 4  
HISTORICAL GROUNDWATER ELEVATION DATA**

Former Dave's Pit Stop #1  
164 Calisotga Road  
Santa Rosa, California  
(All measurements are in feet)

Monitoring Well	Date	Reference Elevation (top of casing)	Depth to Groundwater	Groundwater Elevation
DW-2	1/3/02	291.15	3.76	287.39
	5/6/02		4.51	286.64
	12/19/02		2.53	288.62
	2/27/03		3.11	288.04
	6/24/03		4.97	286.18
	9/10/03		6.58	284.57
	12/17/03		blocked	
	2/19/04		2.30	288.85
	5/25/04		5.04	286.11
	8/12/04		7.09	284.06
	11/18/04		5.48	285.67
	2/25/05		3.00	288.15
	5/20/05		2.92	288.23
	DW-3		1/3/02	293.20
5/6/02		16.32	276.88	
12/19/02		11.98	281.22	
2/27/03		18.45	274.75	
6/24/03		21.54	271.66	
9/10/03		21.81	271.39	
12/17/03		16.12	277.08	
2/19/04		3.97	289.23	
5/25/04		13.31	279.89	
8/12/04		15.18	278.02	
11/18/04		10.12	283.08	
2/25/05		11.48	281.72	
5/20/05		13.43	279.77	

**TABLE 5**  
**HISTORICAL GROUNDWATER ANALYTICAL DATA**  
Former Dave's Pit Stop #1  
164 Calistoga Road  
Santa Rosa, California

Monitoring Well	Date Collected	TPH as Gasoline (ug/L)	Aromatic Volatile Organics				MTBE (8260) (ug/L)
			Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	
MW-1	6/13/90	21,000	13,000	3,100	280	4,900	---
	11/14/90	26,000	2,400	1,700	1,100	2,800	---
	4/2/91	14,000	5,000	230	1,400	190	---
	8/1/91	18,000	6,300	<0.5	1,700	3,900	---
	1/22/92	10,000	2,500	150	650	1,900	---
	9/14/92	13,000	1,500	20	1,000	60	---
	12/16/92	15,000	2,200	190	800	1,400	---
	3/9/93	21,000	1,100	80	540	930	---
	7/14/93	18,000	420	60	500	2,000	---
	9/23/93	11,000	250	30	330	700	---
	12/15/93	2,200	71	4.9	57	100	---
	1/11/96	6,200	410	29	460	220	---
	7/12/96	---	---	---	---	---	---
	1/7/97	---	---	---	---	---	---
	7/28/97	13,000	700	<50	320	<200	67,000
	2/9/98	21,000	490	390	400	300	35,000
	7/30/98	24,000	640	160	150	40	37,000
	3/16/99	3,200	55	4	50	13	5,600
	6/15/99	---	---	---	---	---	---
	10/1/99	3,600	<25	<25	34	<25	1,100
	11/23/99	4,100	49	<5	42	<5	2,100
	2/16/00	5,900	50	<25	63	<25	4,000
	5/10/00	2,700	17	<5	<5	<5	2,000
	7/11/00	1,900	11	6.3	14	<5	970
	10/6/00	1,900	7	<2.5	7	<2.5	850
	3/29/01	2,200	20	<5.0	18	<5.0	1,800
	10/8/02	480	<2.0	<2.0	<2.0	<2.0	650
	1/3/02	2,600	5	<2.0	24	<2.0	890
	5/6/02	2,300	<5	<5	8.6	<10	630
	12/19/02	---	---	---	---	---	---
	2/27/03	2,900	1.2	0.84	13	0.72	160
	6/24/03	1,700	<0.50	<0.50	3.8	<0.50	29
	9/10/03	950	<0.50	<0.50	1.4	<0.50	18
12/17/03	---	---	---	---	---	---	
2/19/04	3,500	1.2	0.74	11	0.69	110	
5/25/04	1,200	<0.50	<0.50	2.4	<0.50	21	
8/12/04	670	<0.50	<0.50	<0.50	<0.50	32	
11/18/04	870	<0.50	<0.50	1.3	<0.50	17	
2/25/05	2,200	0.54	<0.50	7.0	0.56	26	
5/20/05	2,400	<0.50	0.72	9.8	0.56	11	
MW-2	6/13/90	7,700	3,900	520	270	910	---
	11/14/90	3,600	1,200	65	160	310	---
	4/2/91	30,000	4,600	3,900	1,100	5,600	---
	8/1/91	11,000	170	90	450	1,400	---
	1/22/92	FLH	FLH	FLH	FLH	FLH	FLH
	9/14/92	4,800	440	10	460	10.0	---
	12/16/92	4,900	430	64	130	530	---
	3/9/93	7,300	160	81	330	870	---
	7/14/93	770	75	1.2	36	16	---
	9/23/93	1,400	32	20	90	6	---
	12/15/93	9,200	100	14	110	140	---
	1/11/96	900	370	100	18	30	---
	7/12/96	---	---	---	---	---	---
	1/7/97	---	---	---	---	---	---
	7/28/97	3,800	130	70	110	330	30,000
	2/9/98	80,000	700	200	600	1,400	220,000
	7/30/98	18,000	200	460	56	120	19,000
	well destroyed						

**TABLE 5**  
**HISTORICAL GROUNDWATER ANALYTICAL DATA**  
Former Dave's Pit Stop #1  
164 Calistoga Road  
Santa Rosa, California

Monitoring Well	Date Collected	TPH as Gasoline (ug/L)	Aromatic Volatile Organics				MTBE (8260) (ug/L)
			Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	
MW-2R	10/1/99	70	<0.5	<0.5	<0.5	<0.5	28
	11/23/99	110	<0.5	<0.5	<0.5	<0.5	130
	2/16/00	1,100	10	<5	<5	<5	2,500
	5/10/00	88	<0.5	<0.5	<0.5	<0.5	37
	7/11/00	170	0.5	<0.5	<0.5	<0.5	35
	10/6/00	130	<0.5	<0.5	<0.5	<0.5	48
	3/29/01	52	<0.5	<0.5	<0.5	<0.5	20
	10/8/02	160	<0.5	<0.5	<0.5	<0.5	10
	1/3/02	120	7.5	<0.5	<0.5	<0.5	140
	5/6/02	91	<0.5	<0.5	<0.5	<1	<5
	12/19/02	<50	<0.50	<0.50	<0.50	<1.0	11
	2/27/03	71	<0.50	<0.50	<0.50	<0.50	3.6
	6/24/03	87	<0.50	<0.50	<0.50	<0.50	1.1
	9/10/03	69	<0.50	<0.50	<0.50	<0.50	1.9
	12/17/03	<50	<0.50	<0.50	<0.50	<0.50	2.2
	2/19/04	53	0.77	<0.50	<0.50	<0.50	6.4
	5/25/04	81	<0.50	<0.50	<0.50	<0.50	<0.50
	8/12/04	<50	<0.50	<0.50	<0.50	<0.50	1.9
	11/18/04	83*	<0.50	<0.50	<0.50	<0.50	0.68
	2/25/05	88*	<0.50	<0.50	<0.50	<0.50	1.4
5/20/05	52*	<0.50	<0.50	<0.50	<0.50	0.64	
MW-3	6/13/90	310	19	ND	0.5	1.4	---
	11/14/90	450	11	39	18	37	---
	4/2/91	710	18	<0.5	12	19	---
	8/1/91	470	10	<0.5	3	4.4	---
	1/22/92	690.00	9.6	<0.5	14	31	---
	9/14/92	530	2.9	<10	1.1	0.9	---
	12/16/92	850	6.1	2.8	6.0	8.1	---
	3/9/93	780	<0.5	<0.5	8.7	9.6	---
	7/14/93	290	11	1.4	2.4	1.6	---
	9/23/93	320	3.40	ND	ND	ND	---
	12/15/93	540	4.80	11	2.3	3.0	---
	1/11/96	1000	7.00	2.0	18	29	---
	7/12/96	---	---	---	---	---	---
	1/7/97	---	---	---	---	---	---
	7/28/97	370	0.70	0.8	<0.5	<2	42
	2/9/98	1800	30	67	22	50	2,100
	7/30/98	470	0.95	1.0	<0.5	1.6	110
	3/16/99	890	6.9	1.1	0.74	2.1	270
	6/15/99	350	0.62	<0.5	<0.5	<0.5	72
	10/1/99	220	1.2	0.5	<0.5	<0.5	46
	11/23/99	480	4.9	<2.5	<2.5	<2.5	340
	2/16/00	320	2.7	1.0	0.69	2.4	200
	5/10/00	280	1.1	<0.5	<0.5	<0.5	62
	7/11/00	200	1.1	<0.5	<0.5	<0.5	31
	10/6/00	290	1.4	<0.5	<0.5	<0.5	18
	3/29/01	230	2.0	0.6	<0.5	<0.5	76
	10/8/02	140	<0.5	<0.5	<0.5	<0.5	8
	1/3/02	99	<0.5	<0.5	<0.5	<0.5	150
	5/6/02	260	<0.5	<0.5	<0.5	<1	18
	12/19/02	<50	<0.50	<0.50	<0.50	<1.0	360
	2/27/03	130	<0.50	<0.50	<0.50	<0.50	67
	6/24/03	96	<0.50	<0.50	<0.50	<0.50	16
9/10/03	120	<0.50	<0.50	<0.50	<0.50	3.9	
12/17/03	87	<0.50	<0.50	<0.50	<0.50	23	
2/19/04	89	<0.50	<0.50	<0.50	<0.50	8.7	
5/25/04	100	<0.50	<0.50	<0.50	<0.50	3.7	
8/12/04	77	<0.50	<0.50	<0.50	<0.50	2.5	
11/18/04	120	<0.50	<0.50	<0.50	<0.50	4.2	
2/25/05	69	<0.50	<0.50	<0.50	<0.50	4.3	
5/20/05	140*	<0.50	<0.50	<0.50	<0.50	2.7	

**TABLE 5  
HISTORICAL GROUNDWATER ANALYTICAL DATA**

Former Dave's Pit Stop #1  
164 Calistoga Road  
Santa Rosa, California

Monitoring Well	Date Collected	TPH as Gasoline (ug/L)	Aromatic Volatile Organics				MTBE (B260) (ug/L)
			Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	
MW-4	1/11/96	<50	10	0.8	<0.5	<2	—
	7/12/96	80	0.6	<0.5	<0.5	<2	1,800
	1/7/97	300	3.0	5.0	<3	<10	1,600
	7/28/97	<300	<3	<3	<3	<10	760
	2/9/98	1,200	10	8.0	9.0	20	2,800
	7/30/98	1,500	<0.5	<0.5	<0.5	0.54	1,200
	3/16/99	130	<0.5	1.0	<0.5	0.64	980
	6/15/99	<500	<5.0	<5.0	<5.0	<5.0	700
	10/1/99	400	<2.5	<2.5	<2.5	<2.5	520
	11/23/99	310	<2.5	<2.5	<2.5	<2.5	520
	2/16/00	580	<5.0	<5.0	<5.0	<5.0	440
	5/10/00	680	<0.5	<0.5	<0.5	<0.5	850
	7/11/00	430	<2.5	3.1	<2.5	<2.5	610
	10/6/00	360	<1.0	<1.0	<1.0	<1.0	53
	3/29/01	340	<0.5	<0.5	<0.5	<0.5	420
	10/8/02	140	<0.5	<0.5	<0.5	<0.5	610
	1/3/02	320	<0.5	<0.5	<0.5	<0.5	240
	5/6/02	620	<0.5	<0.5	<0.5	<0.5	620
	12/19/02	<50	<0.50	<0.50	<0.50	<1.0	7.4
	2/27/03	300	<0.50	<0.50	<0.50	<0.50	250
	6/24/03	380	<0.50	<0.50	<0.50	<0.50	250
	9/10/03	220	<0.50	<0.50	<0.50	<0.50	150
	12/17/03	130	<0.50	<0.50	<0.50	<0.50	73
	2/19/04	280	<0.50	<0.50	<0.50	<0.50	170
	5/25/04	210	<0.50	<0.50	<0.50	<0.50	150
	8/12/04	130	<0.50	<0.50	<0.50	<0.50	100
11/18/04	<50	<0.50	<0.50	<0.50	<0.50	15	
2/25/05	240*	<0.50	<0.50	<0.50	<0.50	85	
5/20/05	250*	<0.50	<0.50	<0.50	<0.50	99	
MW-5	1/3/02	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	5/6/02	<50	<0.5	<0.5	<0.5	<1	<5
	12/19/02	<50	<0.50	<0.50	<0.50	<1.0	<5.0
	2/27/03	<50	<0.50	<0.50	<0.50	<0.50	5.1
	6/24/03	84	<0.50	<0.50	<0.50	<0.50	4.9
	9/10/03	<50	<0.50	<0.50	<0.50	<0.50	6.1
	12/17/03	---	---	---	---	---	---
	2/19/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	5/25/04	52	<0.50	<0.50	<0.50	<0.50	3.5
	8/12/04	<50	<0.50	<0.50	<0.50	<0.50	3.8
	11/18/04	64	<0.50	2.2	<0.50	<0.50	7.0
	2/25/05	<50	<0.50	1.1	<0.50	<0.50	0.82
5/20/05	<50	<0.50	3.2	<0.50	<0.50	2.1	
DW-1	1/3/02	370	<1	<1	<1	<1	380
	5/6/02	570	<1	<1	<1	<2	300
	12/19/02	98	<0.50	<0.50	<0.50	<1.0	200
	2/27/03	84	<0.50	<0.50	<0.50	<0.50	150
	6/24/03	87	<0.50	<0.50	<0.50	<0.50	150
	9/10/03	<50	<0.50	<0.50	<0.50	<0.50	110
	12/17/03	<50	<0.50	<0.50	<0.50	<0.50	70
	2/19/04	67	<0.50	<0.50	<0.50	<0.50	63
	5/25/04	<50	<0.50	<0.50	<0.50	<0.50	50
	8/12/04	<50	<0.50	<0.50	<0.50	<0.50	38
	11/18/04	<50	<0.50	<0.50	<0.50	<0.50	34
	2/25/05	<50	<0.50	<0.50	<0.50	<0.50	28
	5/20/05	<50	<0.50	<0.50	<0.50	<0.50	29

**TABLE 5  
HISTORICAL GROUNDWATER ANALYTICAL DATA**

Former Dave's Pit Stop #1  
164 Calistoga Road  
Santa Rosa, California

Monitoring Well	Date Collected	TPH as Gasoline (ug/L)	Aromatic Volatile Organics				MTBE (8260) (ug/L)
			Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	
DW-2	1/3/02	<50	<0.5	<0.5	<0.5	<0.5	0.68
	5/6/02	<50	<0.5	<0.5	<0.5	<1	<5
	12/19/02	---	---	---	---	---	---
	2/27/03	<50	<0.50	<0.50	<0.50	<0.50	1.4
	6/24/03	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	9/10/03	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	12/17/03	---	---	---	---	---	---
	2/19/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	5/25/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	8/12/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	11/18/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	2/25/05	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	5/20/05	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	DW-3	1/3/02	<50	<0.5	<0.5	<0.5	<0.5
5/6/02		<50	<0.5	<0.5	<0.5	<1	<5
12/19/02		<50	<0.50	<0.50	<0.50	<1.0	<5.0
2/27/03		<50	<0.50	<0.50	<0.50	<0.50	<5.0
6/24/03		<50	<0.50	<0.50	<0.50	<0.50	<0.50
9/10/03		<50	<0.50	<0.50	<0.50	<0.50	<0.50
12/17/03		<50	<0.50	<0.50	<0.50	<0.50	<0.50
2/19/04		<50	<0.50	<0.50	<0.50	<0.50	<0.50
5/25/04		<50	<0.50	<0.50	<0.50	<0.50	<0.50
8/12/04		<50	<0.50	<0.50	<0.50	<0.50	<0.50
11/18/04		<50	<0.50	<0.50	<0.50	<0.50	<0.50
2/25/05		<50	<0.50	<0.50	<0.50	<0.50	<0.50
5/20/05		<50	<0.50	<0.50	<0.50	<0.50	<0.50
Creek-DS		6/24/03	<50	<0.50	<0.50	<0.50	<0.50
	9/10/03	Creek dry					
	12/17/03	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	2/19/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	5/25/04	<50	<0.50	<0.50	<0.50	<0.50	1.3
	11/18/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	2/25/05	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	5/20/05	<50	<0.50	<0.50	<0.50	<0.50	<0.50
Creek-MS	6/24/03	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	9/10/03	Creek dry					
	12/17/03	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	2/19/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	5/25/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	11/18/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	2/25/05	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	5/20/05	<50	<0.50	<0.50	<0.50	<0.50	<0.50
Creek-US	6/24/03	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	9/10/03	Creek dry					
	12/17/03	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	2/19/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	5/25/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	11/18/04	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	2/25/05	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	5/20/05	<50	<0.50	<0.50	<0.50	<0.50	<0.50
Domestic Well	2/25/05	<50	<0.50	<0.50	<0.50	<0.50	<0.50

NOTES:

TPH - Total Petroleum Hydrocarbons

MTBE - Methyl Tertiary Butyl Ether

--- -Not analyzed

ug/L - micrograms per Liter

< -below laboratory detection limits

\*TPH as gasoline does not exhibit a typical Gasoline chromatographic pattern for sample

**APPENDIX A**

**APEX STANDARD OPERATING PROCEDURES**

**APEX ENVIROTECH, INC.**  
**STANDARD OPERATING PROCEDURES**  
Quarterly Monitoring Reports

**SOP - 4**  
**SAMPLE IDENTIFICATION AND CHAIN-OF**  
**CUSTODY PROCUDURES**

Sample identification and chain-of-custody procedures ensure sample integrity as well as document sample possession from the time of collection to ultimate disposal. Each sample container submitted for analysis is labeled to identify the job number, date, time of sample collection, a sample number unique to the sample, any in-field measurements made, other pertinent field observations also recorded on the field excavation or boring logs

Chain-of-custody forms are used to record possession of the sample from time of collection to arrival at the laboratory. During shipment, the person with custody of the samples will relinquish them to the next person by signing the chain-of-custody form(s) and noting the date and time. The sample control officer at the laboratory will verify sample integrity, correct preservation, confirm collection in the proper container(s), and ensure adequate volume for analysis.

If these conditions are met, the samples will be assigned unique laboratory log numbers for identification throughout analysis and reporting. The log numbers will be recorded on the chain-of-custody forms and in the legally-required log book maintained in the laboratory. The sample description, date received, client's name, and any other relevant information will also be recorded.

**SOP - 5**  
**LABORATORY ANALYTICAL QUALITY**  
**ASSURANCE AND CONTROL**

In addition to routine instrument calibration, replicates, spikes, blanks, spiked blanks, and certified reference materials are routinely analyzed at method-specific frequencies to monitor precision and bias. Additional components of the laboratory Quality Assurance/Quality Control program include:

1. Participation in state and federal laboratory accreditation/certification programs;
2. Participation in both U.S. EPA Performance Evaluation studies (WS and WP studies) and inter-laboratory performance evaluation programs;
3. Standard operating procedures describing routine and periodic instrument maintenance;
4. "out-of-Control"/Corrective Action documentation procedures; and,
5. Multi-level review of raw data and client reports

**SOP - 7**  
**GROUNDWATER PURGING AND SAMPLING**

Prior to water sampling, each well is purged by evacuating a minimum of three wetted well-casing volumes of groundwater. When required, purging will continue until either the discharge water temperature, conductivity, or pH stabilize, a maximum of ten wetted-casing volumes of groundwater have been recovered, or the well is bailed dry.

When practical, the groundwater sample should be collected when the water level in the well recovers to at least 80 percent of its static level.

The sampling equipment consists of either a "Teflon" bailer, PVC bailer, or stainless steel bladder pump with a "Teflon" bladder. If the sampling system is dedicated to the well, then the bailer is usually "Teflon," but the bladder pump is PVC with a polypropylene bladder. In general and depending on the intended laboratory analysis, 40-milliliter glass, volatile organic analysis (VOA) vials, with "Teflon" septa, are used as sample containers.

**SOP - 12**  
**MEASURING LIQUID LEVELS USING**  
**WATER LEVEL METER OR INTERFACE**  
**PROBE**

Field equipment used for liquid-level gauging typically includes the measuring instrument (water-level meter or interface probe and product bailer(s)). The field kit also includes cleaning supplies (buckets, solution, spray bottles, and deionized water) to be used in cleaning the equipment between wells.

Prior to measurements, the instrument tip is lowered into the well until it touches bottom. Using the previously established top-of-casing or top-of-box (i.e., wellhead vault) point, the probe cord (or halyard) is marked and a measuring tape (graduated in hundredths of a foot) is used to determine the distance between the probe end and the marking on the cord. This measurement is then recorded on the liquid-level data sheet as the "Measured Total Depth" of the well.

When necessary in using the interface probe to measure liquid levels, the probe is first electrically grounded to either the metal stove pipe or another metal object nearby. When no ground is available, reproducible measurements can be obtained by clipping the ground lead to the handle of the interface probe case.

The probe tip is then lowered into the well and submerged in the groundwater. An oscillating (beeping) tone indicates the probe is in water. The probe is slowly raised until either the oscillating tone ceases or becomes a steady tone. In either case, this is the depth-to-water (DTW) indication of the DTW measurement is made accordingly. The steady tone indicates floating liquid hydrocarbons (FLH). In this case, the depth-to-product (DTP) indication and the DTP measurement is made accordingly.

The process of lowering and raising the probe must be repeated several times to ensure accurate measurements. The DTW and DTP measurements are recorded on the liquid-level data sheet. When FLH are indicated by the probe's response, a product bailer is lowered partially through the FLH water interface to confirm the FLH thickness, particularly in cases where the FLH layer is quite thin. This measurement is recorded on the data sheet as "FLH thickness."

In order to avoid cross-contamination of wells during the liquid-level measurement process, wells are measured in the order of "clean" to "dirty" (where such information is available). In addition, all measurement equipment is cleaned with solution and thoroughly rinsed with deionized water before use, between measurements in respective wells, and at the completion of the day's use.

**APPENDIX B**  
**FIELD DATA SHEETS**





# Monitoring Data

Project:

Project Number: ERA02-028

Date:

5/20/05

Recorded By:

KCM

WELL	TIME	TEMP (deg C)	pH	COND. (uS/cm)	DISSOLVED OXYGEN	TOTAL VOLUME REMOVED	COMMENTS/OBSERVATIONS
MWF-3	1451	21.9	6.6	635		10	1.5gpm slight odor
	1457	21.9	6.5	648		20	
	1504	21.9	6.6	96		30	sample lab @ 1740
MWF-2R	1545	18.7	7.3	502		2.50	slight odor
	1549	18.4	6.7	443		5	
	1554	18.4	6.7	406		7.50	sample lab @ 1750
MWF-1	1609	20.4	6.8	505		10	1.5gpm odor
	1615	19.9	6.9	362		20	
	1621	19.5	6.9	145		30	sample lab @ 1800
MWF-4	1631	19.3	7.0	194		2.50	
	1636	18.5	6.7	466		5	
	1641	18.3	6.7	477		7.50	sample lab @ 1810



Monitoring Data

Project: Former Dave's Pit Stop #1  
 Project Number: EPA02-028  
 Date: 5/20/05  
 Recorded By: PCM

WELL	TIME	TEMP (deg)	pH	COND. (uS/cm)	DISSOLVED OXYGEN	TOTAL VOLUME REMOVED	COMMENTS/OBSERVATIONS
DW-2	1253	19.7	7.1	511		6	
	1305	19.7	7.4	240		12	
	1316	19.8	7.4	480		18	sampled @ 1700
DW-3	1340	20.3	7.6	198		4.25	
	1344	20.0	7.3	184		<del>5.25</del> 8.75	Well dry @ 5.25 gal purged
						13	sampled @ 1720
DW-1	1400	21.0	7.2	578		4.25	odor
	1406	20.5	7.7	468		<del>6.00</del> 8.75	Well dry @ 6 gal purged
						13	sampled @ 1730
MW-5	1418	19.6	7.2	501		1	
	1421	18.5	6.7	506		3	
	1425	18.7	6.6	546		5.25	sampled @ 1710

TEMPPH.XLS  
4/1/97

US sampled @ 1155  
 MS ↓ 1205  
 DS ↓ 1215

**APPENDIX C**

**LABORATORY ANALYTICAL REPORT AND  
CHAIN-OF-CUSTODY FORM**







Report Number : 43936

Date : 5/31/2005

Rebekah Westrup  
Apex Envirotech Inc  
11244 Pyrites Way  
Gold River, CA 95670-4481

Subject : 11 Water Samples  
Project Name : Former Dave's Pit Stop #1  
Project Number : ERA02 028-QM

Dear Ms. Westrup,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

A handwritten signature in black ink, appearing to read "Joel Kiff".

Joel Kiff



Report Number : 43936

Date : 5/31/2005

Subject : 11 Water Samples  
Project Name : Former Dave's Pit Stop #1  
Project Number : ERA02.028-QM

## Case Narrative

Hydrocarbons reported as TPH as Gasoline do not exhibit a typical Gasoline chromatographic pattern for samples MW-2R, MW-3 and MW-4.

Approved By:

A handwritten signature in black ink, appearing to read "Joel Kiff".

Joel Kiff



Report Number : 43936

Date : 5/31/2005

Project Name : **Former Dave's Pit Stop #1**

Project Number : **ERA02.028-QM**

Sample : **MW-1**

Matrix : Water

Lab Number : 43936-01

Sample Date :5/20/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	5/25/2005
<b>Toluene</b>	<b>0.72</b>	0.50	ug/L	EPA 8260B	5/25/2005
<b>Ethylbenzene</b>	<b>9.8</b>	0.50	ug/L	EPA 8260B	5/25/2005
<b>Total Xylenes</b>	<b>0.56</b>	0.50	ug/L	EPA 8260B	5/25/2005
<b>Methyl-t-butyl ether (MTBE)</b>	<b>11</b>	0.50	ug/L	EPA 8260B	5/25/2005
<b>TPH as Gasoline</b>	<b>2400</b>	50	ug/L	EPA 8260B	5/25/2005
Toluene - d8 (Surr)	98.9		% Recovery	EPA 8260B	5/25/2005
4-Bromofluorobenzene (Surr)	95.1		% Recovery	EPA 8260B	5/25/2005

Sample : **MW-2R**

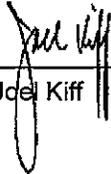
Matrix : Water

Lab Number : 43936-02

Sample Date :5/20/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	5/28/2005
<b>Toluene</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	5/28/2005
<b>Ethylbenzene</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	5/28/2005
<b>Total Xylenes</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	5/28/2005
<b>Methyl-t-butyl ether (MTBE)</b>	<b>0.64</b>	0.50	ug/L	EPA 8260B	5/28/2005
<b>TPH as Gasoline</b>	<b>52</b>	50	ug/L	EPA 8260B	5/28/2005
Toluene - d8 (Surr)	106		% Recovery	EPA 8260B	5/28/2005
4-Bromofluorobenzene (Surr)	94.9		% Recovery	EPA 8260B	5/28/2005

Approved By:

  
Joel Kiff



Report Number : 43936

Date : 5/31/2005

Project Name : **Former Dave's Pit Stop #1**

Project Number : **ERA02.028-QM**

Sample : **MW-3**

Matrix : Water

Lab Number : 43936-03

Sample Date :5/20/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>Toluene</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>Ethylbenzene</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>Total Xylenes</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>Methyl-t-butyl ether (MTBE)</b>	2.7	0.50	ug/L	EPA 8260B	5/27/2005
<b>TPH as Gasoline</b>	140	50	ug/L	EPA 8260B	5/27/2005
Toluene - d8 (Surr)	96.5		% Recovery	EPA 8260B	5/27/2005
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	5/27/2005

Sample : **MW-4**

Matrix : Water

Lab Number : 43936-04

Sample Date :5/20/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>Toluene</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>Ethylbenzene</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>Total Xylenes</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>Methyl-t-butyl ether (MTBE)</b>	99	0.50	ug/L	EPA 8260B	5/27/2005
<b>TPH as Gasoline</b>	250	50	ug/L	EPA 8260B	5/27/2005
Toluene - d8 (Surr)	96.0		% Recovery	EPA 8260B	5/27/2005
4-Bromofluorobenzene (Surr)	105		% Recovery	EPA 8260B	5/27/2005

Approved By:

  
Joel Kiff



Report Number : 43936

Date : 5/31/2005

Project Name : **Former Dave's Pit Stop #1**

Project Number : **ERA02.028-QM**

Sample : **MW-5**

Matrix : Water

Lab Number : 43936-05

Sample Date :5/20/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	5/27/2005
<b>Toluene</b>	<b>3.2</b>	0.50	ug/L	EPA 8260B	5/27/2005
<b>Ethylbenzene</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	5/27/2005
<b>Total Xylenes</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	5/27/2005
<b>Methyl-t-butyl ether (MTBE)</b>	<b>2.1</b>	0.50	ug/L	EPA 8260B	5/27/2005
<b>TPH as Gasoline</b>	<b>&lt; 50</b>	50	ug/L	EPA 8260B	5/27/2005
Toluene - d8 (Surr)	96.3		% Recovery	EPA 8260B	5/27/2005
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	5/27/2005

Sample : **DW-1**

Matrix : Water

Lab Number : 43936-06

Sample Date :5/20/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	5/27/2005
<b>Toluene</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	5/27/2005
<b>Ethylbenzene</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	5/27/2005
<b>Total Xylenes</b>	<b>&lt; 0.50</b>	0.50	ug/L	EPA 8260B	5/27/2005
<b>Methyl-t-butyl ether (MTBE)</b>	<b>29</b>	0.50	ug/L	EPA 8260B	5/27/2005
<b>TPH as Gasoline</b>	<b>&lt; 50</b>	50	ug/L	EPA 8260B	5/27/2005
Toluene - d8 (Surr)	96.3		% Recovery	EPA 8260B	5/27/2005
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	5/27/2005

Approved By:

  
Joel Kiff



Report Number : 43936

Date : 5/31/2005

Project Name : **Former Dave's Pit Stop #1**

Project Number : **ERA02.028-QM**

Sample : **DW-2**

Matrix : Water

Lab Number : 43936-07

Sample Date :5/20/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>Toluene</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>Ethylbenzene</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>Total Xylenes</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>Methyl-t-butyl ether (MTBE)</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>TPH as Gasoline</b>	< 50	50	ug/L	EPA 8260B	5/27/2005
Toluene - d8 (Surr)	95.3		% Recovery	EPA 8260B	5/27/2005
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	5/27/2005

Sample : **DW-3**

Matrix : Water

Lab Number : 43936-08

Sample Date :5/20/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>Toluene</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>Ethylbenzene</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>Total Xylenes</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>Methyl-t-butyl ether (MTBE)</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>TPH as Gasoline</b>	< 50	50	ug/L	EPA 8260B	5/27/2005
Toluene - d8 (Surr)	95.4		% Recovery	EPA 8260B	5/27/2005
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	5/27/2005

Approved By:

  
Joel Kiff



Report Number : 43936

Date : 5/31/2005

Project Name : **Former Dave's Pit Stop #1**

Project Number : **ERA02.028-QM**

Sample : **US**

Matrix : Water

Lab Number : 43936-09

Sample Date :5/20/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	< 0.50	0.50	ug/L	EPA 8260B	5/28/2005
<b>Toluene</b>	< 0.50	0.50	ug/L	EPA 8260B	5/28/2005
<b>Ethylbenzene</b>	< 0.50	0.50	ug/L	EPA 8260B	5/28/2005
<b>Total Xylenes</b>	< 0.50	0.50	ug/L	EPA 8260B	5/28/2005
<b>Methyl-t-butyl ether (MTBE)</b>	< 0.50	0.50	ug/L	EPA 8260B	5/28/2005
<b>TPH as Gasoline</b>	< 50	50	ug/L	EPA 8260B	5/28/2005
Toluene - d8 (Surr)	96.1		% Recovery	EPA 8260B	5/28/2005
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	5/28/2005

Sample : **MS**

Matrix : Water

Lab Number : 43936-10

Sample Date :5/20/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>Toluene</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>Ethylbenzene</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>Total Xylenes</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>Methyl-t-butyl ether (MTBE)</b>	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
<b>TPH as Gasoline</b>	< 50	50	ug/L	EPA 8260B	5/27/2005
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	5/27/2005
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	5/27/2005

Approved By:

  
Joel Kiff



Report Number : 43936

Date : 5/31/2005

Project Name : **Former Dave's Pit Stop #1**

Project Number : **ERA02.028-QM**

Sample : **DS**

Matrix : Water

Lab Number : 43936-11

Sample Date :5/20/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	< 0.50	0.50	ug/L	EPA 8260B	5/28/2005
<b>Toluene</b>	< 0.50	0.50	ug/L	EPA 8260B	5/28/2005
<b>Ethylbenzene</b>	< 0.50	0.50	ug/L	EPA 8260B	5/28/2005
<b>Total Xylenes</b>	< 0.50	0.50	ug/L	EPA 8260B	5/28/2005
<b>Methyl-t-butyl ether (MTBE)</b>	< 0.50	0.50	ug/L	EPA 8260B	5/28/2005
<b>TPH as Gasoline</b>	< 50	50	ug/L	EPA 8260B	5/28/2005
Toluene - d8 (Surr)	95.7		% Recovery	EPA 8260B	5/28/2005
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	5/28/2005

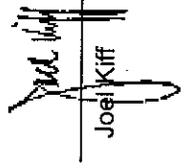
Approved By:

  
Joel Kiff

Report Number : 43936  
Date : 5/31/2005

**QC Report : Method Blank Data**  
**Project Name : Former Dave's Pit Stop #1**  
**Project Number : ERA02.028-QM**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed	Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005	Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/25/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005	Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/25/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005	Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/25/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005	Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/25/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005	Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/25/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/27/2005	TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/25/2005
Toluene - d8 (Surr)	102		%	EPA 8260B	5/27/2005	Toluene - d8 (Surr)	100		%	EPA 8260B	5/25/2005
4-Bromofluorobenzene (Surr)	97.1		%	EPA 8260B	5/27/2005	4-Bromofluorobenzene (Surr)	94.4		%	EPA 8260B	5/25/2005
Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005	Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005	Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005	Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005	Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005	Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/27/2005	TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/27/2005
Toluene - d8 (Surr)	96.6		%	EPA 8260B	5/27/2005	Toluene - d8 (Surr)	103		%	EPA 8260B	5/27/2005
4-Bromofluorobenzene (Surr)	105		%	EPA 8260B	5/27/2005	4-Bromofluorobenzene (Surr)	104		%	EPA 8260B	5/27/2005
Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005	Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005	Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005	Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005	Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005	Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/27/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/27/2005	TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/27/2005
Toluene - d8 (Surr)	95.6		%	EPA 8260B	5/27/2005	Toluene - d8 (Surr)	103		%	EPA 8260B	5/27/2005
4-Bromofluorobenzene (Surr)	104		%	EPA 8260B	5/27/2005	4-Bromofluorobenzene (Surr)	104		%	EPA 8260B	5/27/2005

  
Approved By: Joel Kiff

KIFF ANALYTICAL, LLC  
2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number · 43936  
Date : 5/31/2005

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Project Name : **Former Dave's Pit Stop #1**  
Project Number · **ERA02.028-QM**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	44032-02	<0.50	38.2	38.5	40.5	40.8	ug/L	EPA 8260B	5/27/05	106	106	0.149	70-130	25
Toluene	44032-02	<0.50	38.2	38.5	40.0	40.3	ug/L	EPA 8260B	5/27/05	104	105	0.102	70-130	25
Tert-Butanol	44032-02	<5.0	191	192	196	200	ug/L	EPA 8260B	5/27/05	102	104	1.27	70-130	25
Methyl-t-Butyl Ether	44032-02	<0.50	38.2	38.5	41.4	40.8	ug/L	EPA 8260B	5/27/05	108	106	2.07	70-130	25
Benzene	43974-04	<0.50	40.0	40.0	39.1	38.5	ug/L	EPA 8260B	5/27/05	97.9	96.3	1.60	70-130	25
Toluene	43974-04	<0.50	40.0	40.0	38.3	37.7	ug/L	EPA 8260B	5/27/05	95.7	94.2	1.58	70-130	25
Tert-Butanol	43974-04	<5.0	200	200	191	192	ug/L	EPA 8260B	5/27/05	95.6	95.8	0.215	70-130	25
Methyl-t-Butyl Ether	43974-04	1.7	40.0	40.0	41.1	41.3	ug/L	EPA 8260B	5/27/05	98.6	99.1	0.489	70-130	25
Benzene	43936-01	<0.50	40.0	40.0	38.0	36.8	ug/L	EPA 8260B	5/25/05	95.0	92.1	3.15	70-130	25
Toluene	43936-01	0.72	40.0	40.0	38.7	37.7	ug/L	EPA 8260B	5/25/05	94.9	92.4	2.71	70-130	25
Tert-Butanol	43936-01	48	200	200	262	261	ug/L	EPA 8260B	5/25/05	107	106	0.305	70-130	25
Methyl-t-Butyl Ether	43936-01	11	40.0	40.0	50.5	51.2	ug/L	EPA 8260B	5/25/05	98.8	100	1.83	70-130	25
Benzene	43936-10	<0.50	40.0	40.0	39.4	37.9	ug/L	EPA 8260B	5/27/05	98.4	94.8	3.74	70-130	25
Toluene	43936-10	<0.50	40.0	40.0	39.3	37.8	ug/L	EPA 8260B	5/27/05	98.2	94.4	3.93	70-130	25
Tert-Butanol	43936-10	<5.0	200	200	193	193	ug/L	EPA 8260B	5/27/05	96.4	96.4	0.0282	70-130	25
Methyl-t-Butyl Ether	43936-10	<0.50	40.0	40.0	34.7	34.3	ug/L	EPA 8260B	5/27/05	86.9	85.8	1.23	70-130	25
Benzene	43971-02	<0.50	40.0	40.0	39.4	38.6	ug/L	EPA 8260B	5/27/05	98.6	96.5	2.14	70-130	25
Toluene	43971-02	<0.50	40.0	40.0	38.5	37.9	ug/L	EPA 8260B	5/27/05	96.2	94.8	1.51	70-130	25



Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 43936  
 Date : 5/31/2005

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Project Name : **Former Dave's Pit Stop #1**  
 Project Number : **ERA02.028-QM**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Tert-Butanol	43971-02	<5.0	200	200	197	195	ug/L	EPA 8260B	5/27/05	98.4	97.4	0.968	70-130	25
Methyl-t-Butyl Ether	43971-02	<0.50	40.0	40.0	39.1	39.0	ug/L	EPA 8260B	5/27/05	97.6	97.4	0.261	70-130	25



Approved By: Joel Kiff

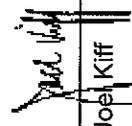
KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

QC Report : Laboratory Control Sample (LCS)

Project Name : Former Dave's Pit Stop #1  
 Project Number : ERA02.028-QM

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	5/27/05	106	70-130
Toluene	40.0	ug/L	EPA 8260B	5/27/05	104	70-130
Tert-Butanol	200	ug/L	EPA 8260B	5/27/05	110	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	5/27/05	107	70-130
Benzene	40.0	ug/L	EPA 8260B	5/27/05	97.0	70-130
Toluene	40.0	ug/L	EPA 8260B	5/27/05	94.9	70-130
Tert-Butanol	200	ug/L	EPA 8260B	5/27/05	97.2	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	5/27/05	99.8	70-130
Benzene	40.0	ug/L	EPA 8260B	5/25/05	92.0	70-130
Toluene	40.0	ug/L	EPA 8260B	5/25/05	94.9	70-130
Tert-Butanol	200	ug/L	EPA 8260B	5/25/05	88.0	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	5/25/05	91.1	70-130
Benzene	40.0	ug/L	EPA 8260B	5/27/05	98.7	70-130
Toluene	40.0	ug/L	EPA 8260B	5/27/05	98.1	70-130
Tert-Butanol	200	ug/L	EPA 8260B	5/27/05	96.2	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	5/27/05	86.7	70-130
Benzene	40.0	ug/L	EPA 8260B	5/27/05	96.2	70-130

  
 Approved By: Joel Kiff

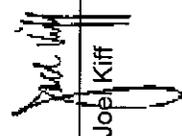
KIFF ANALYTICAL, LLC  
 2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 43936  
Date : 5/31/2005

QC Report : Laboratory Control Sample (LCS)

Project Name : Former Dave's Pit Stop #1  
Project Number : ERA02.028-QM

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Toluene	40.0	ug/L	EPA 8260B	5/27/05	96.4	70-130
Tert-Butanol	200	ug/L	EPA 8260B	5/27/05	107	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	5/27/05	98.6	70-130



Joel Kiff

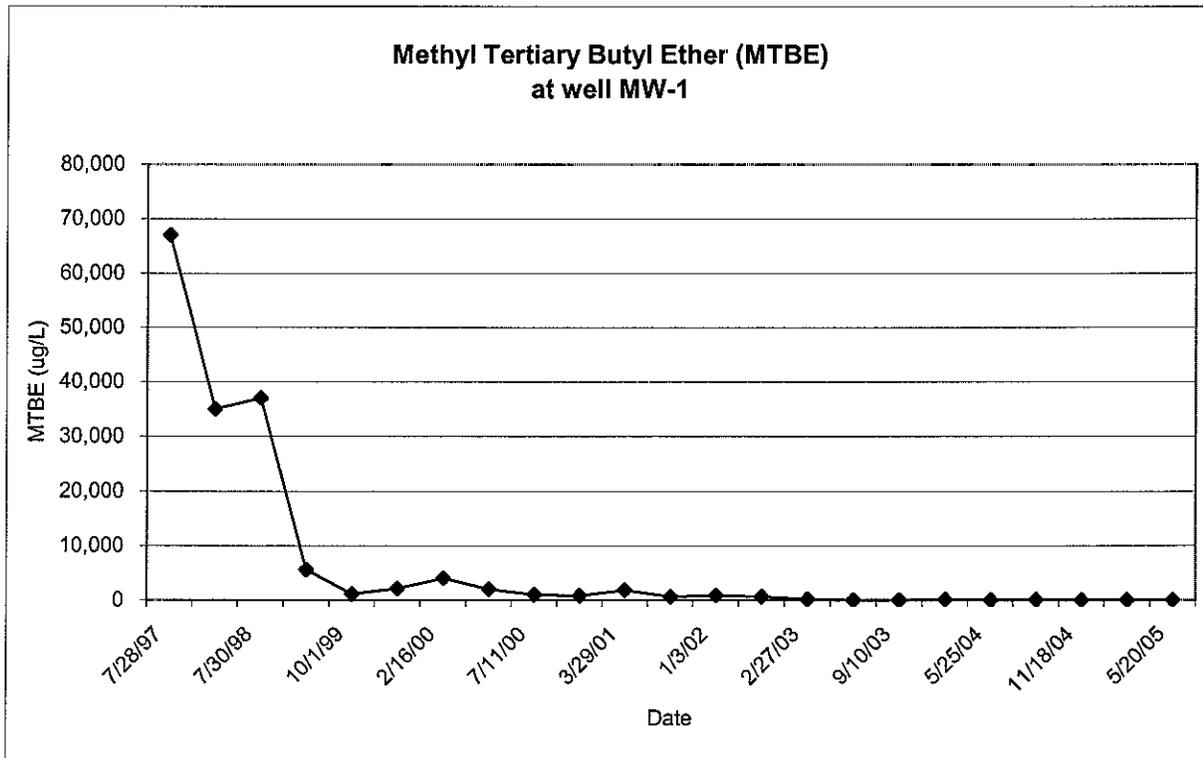
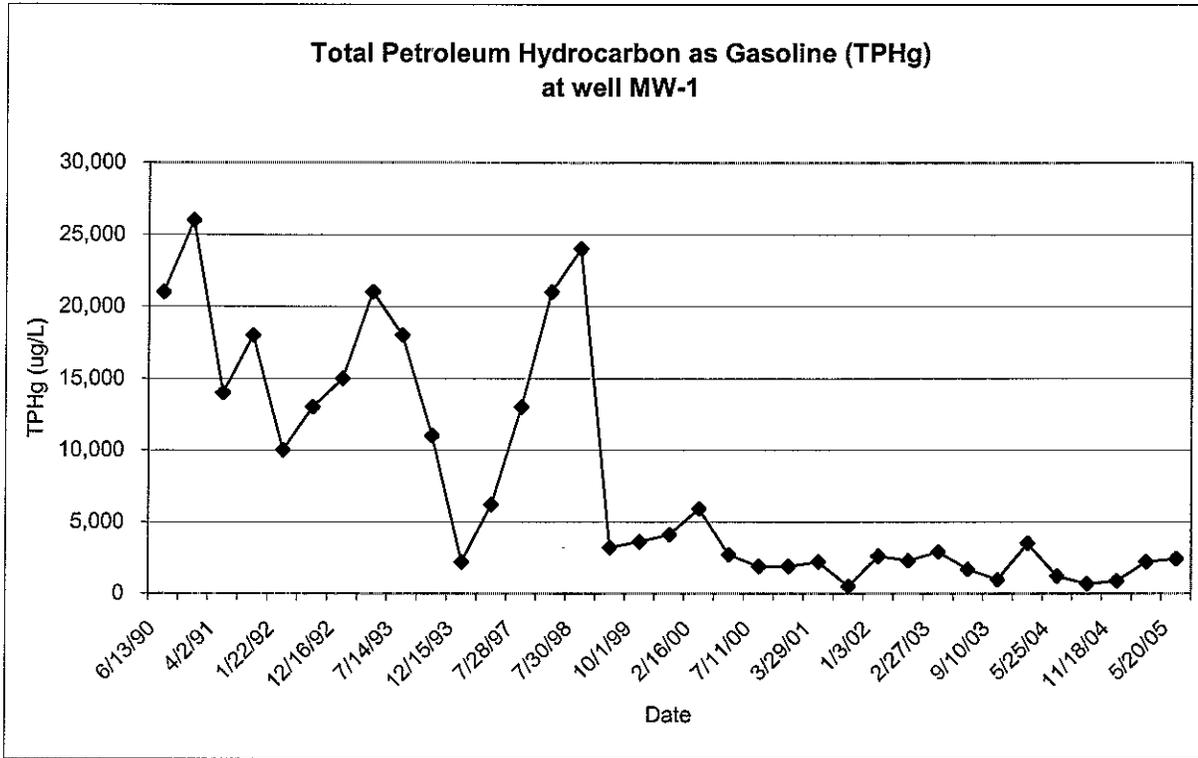
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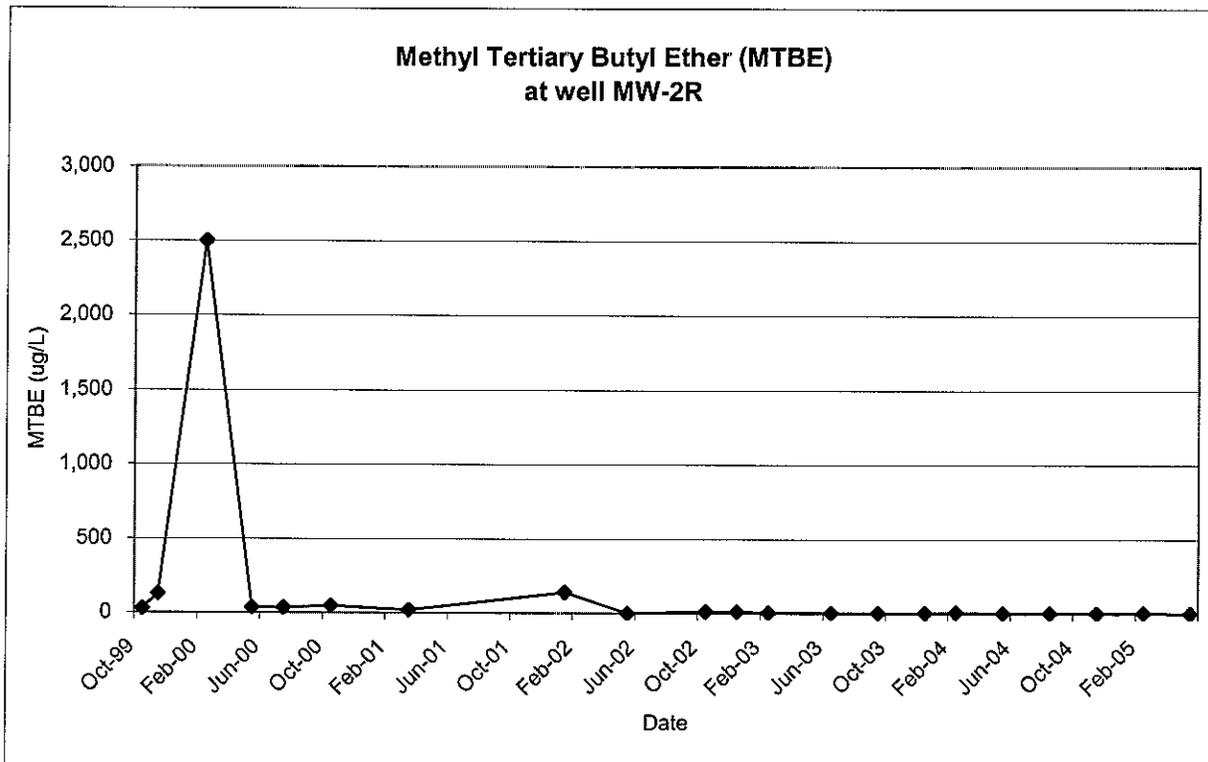
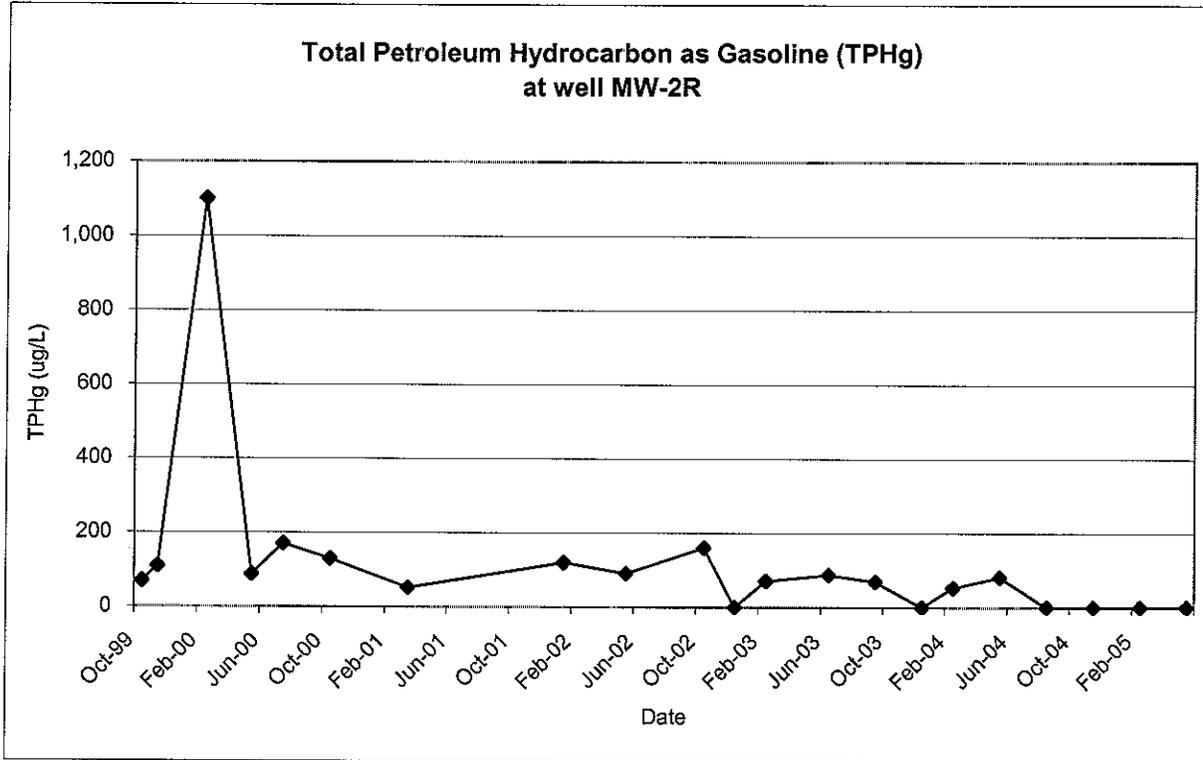
KIFF ANALYTICAL, LLC

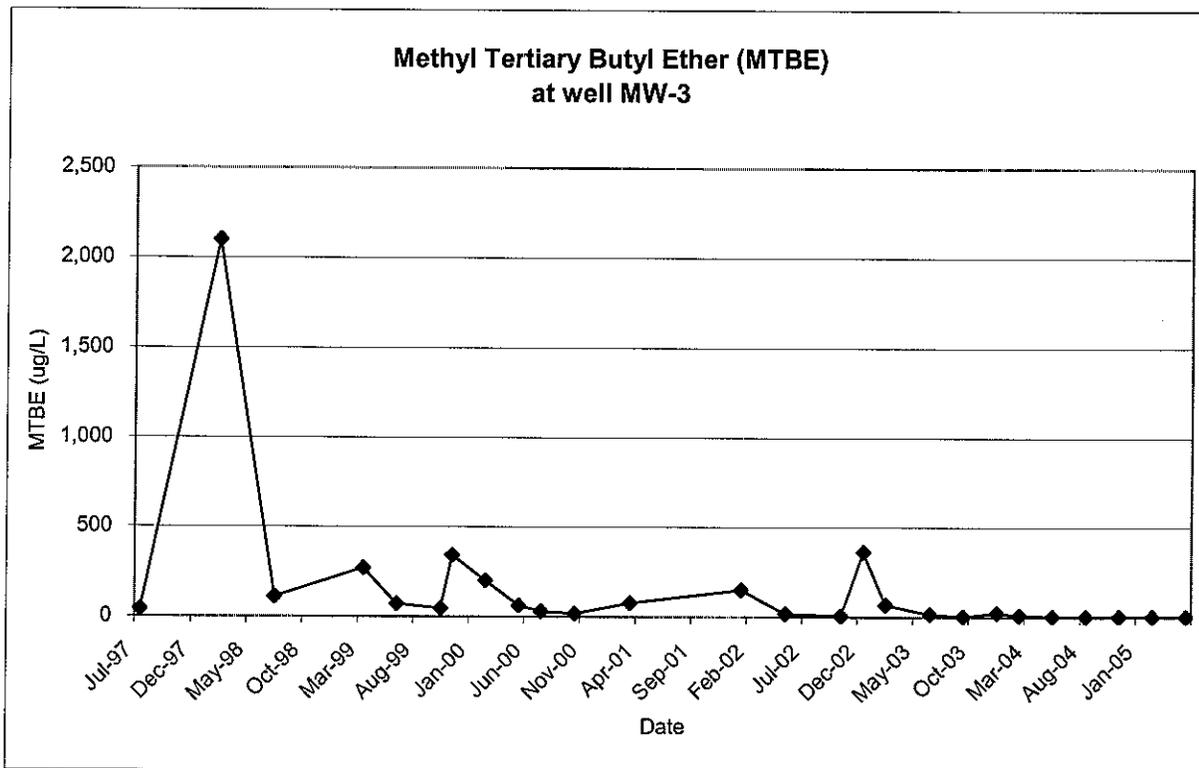
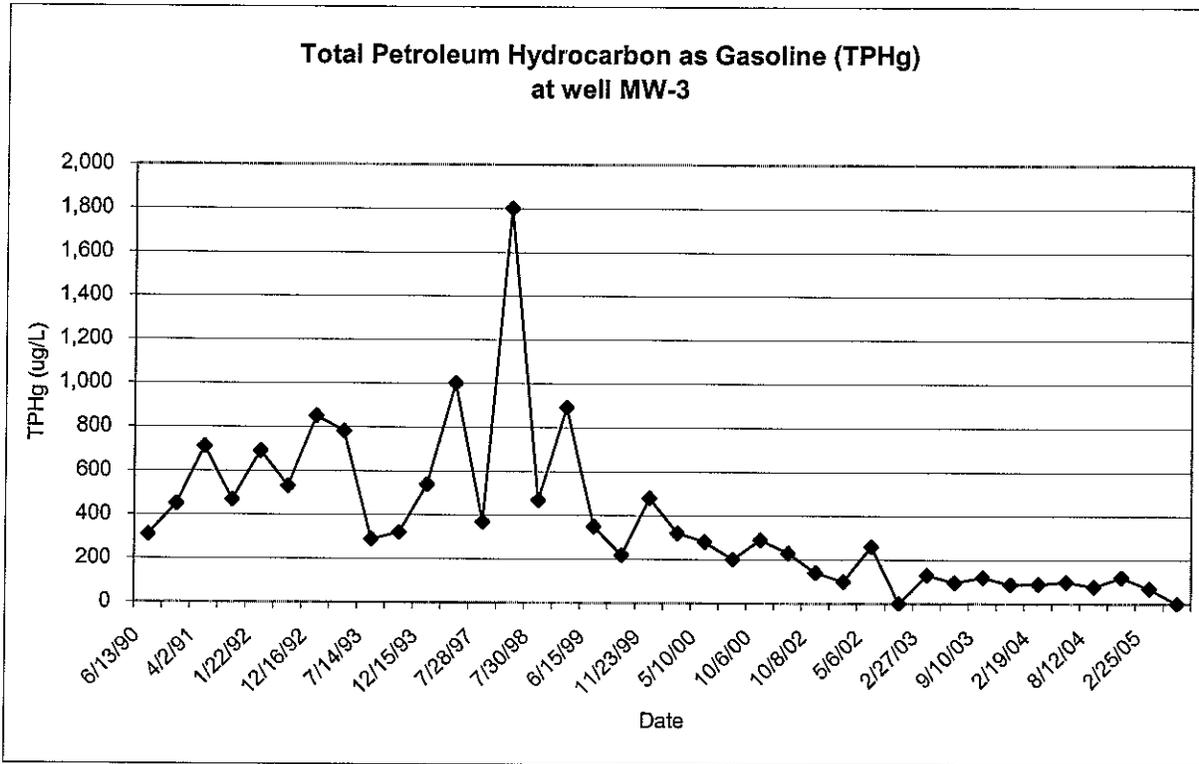
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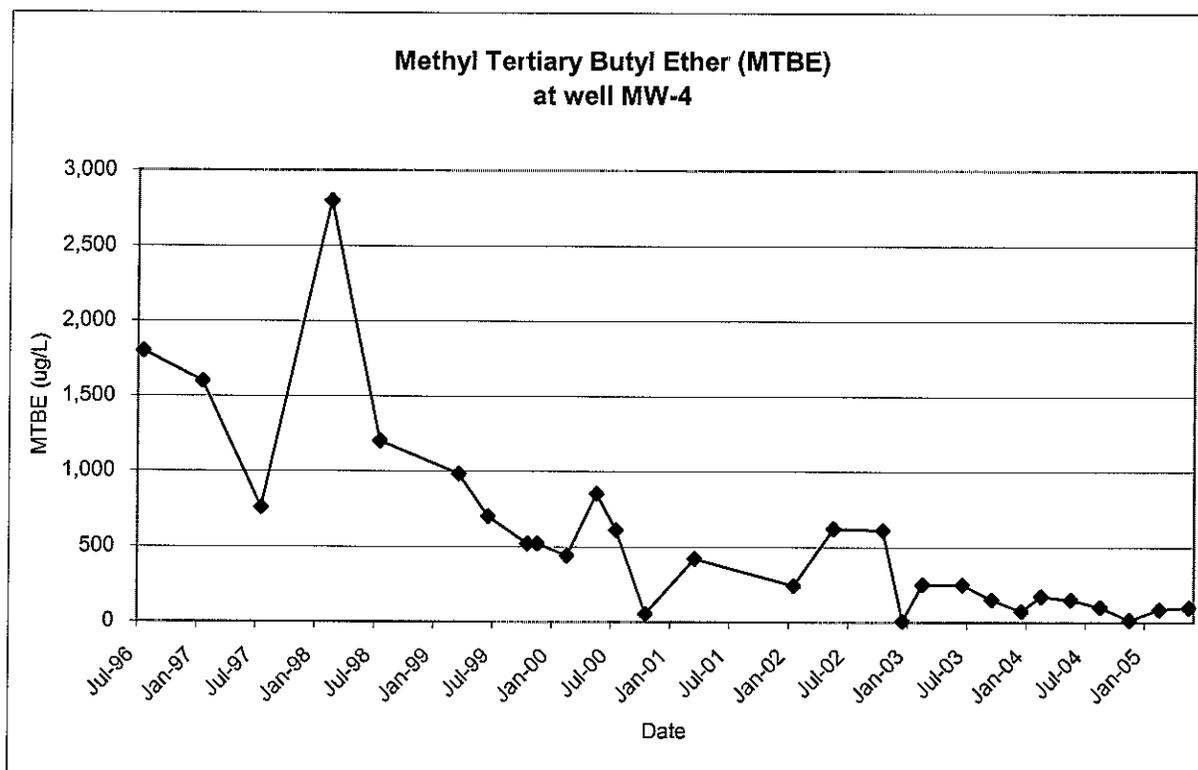
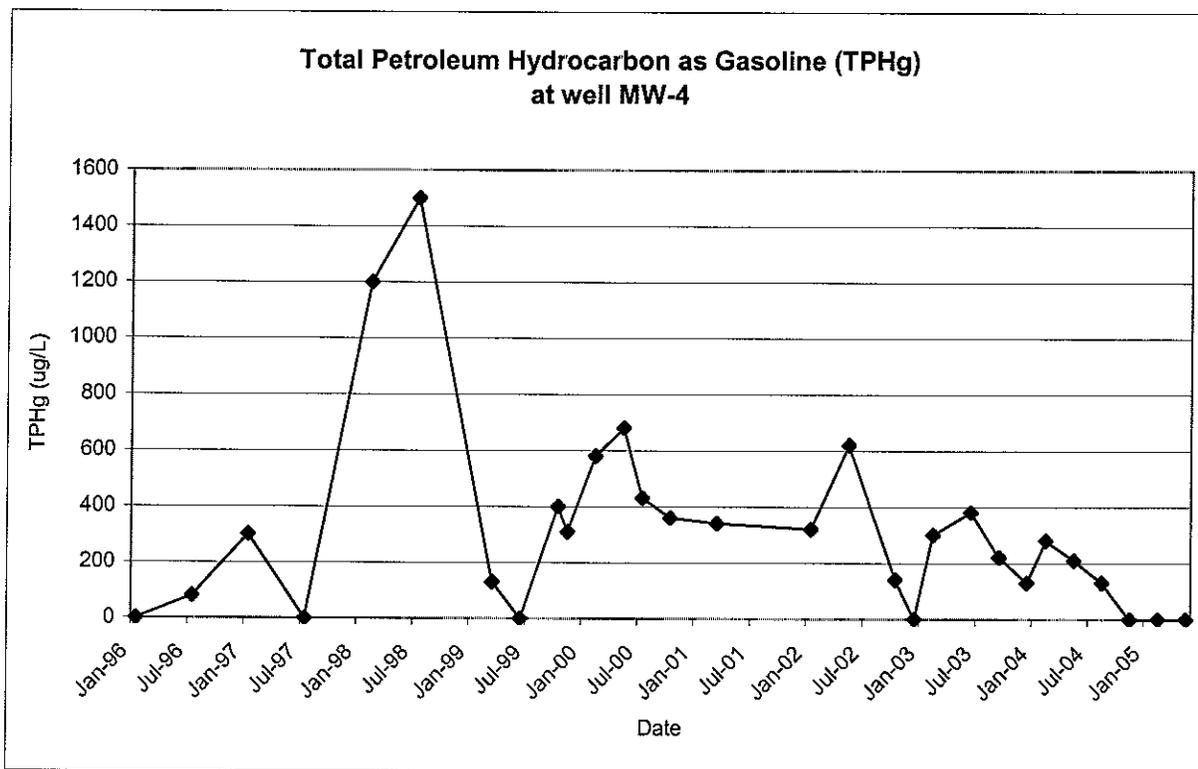
## **APPENDIX D**

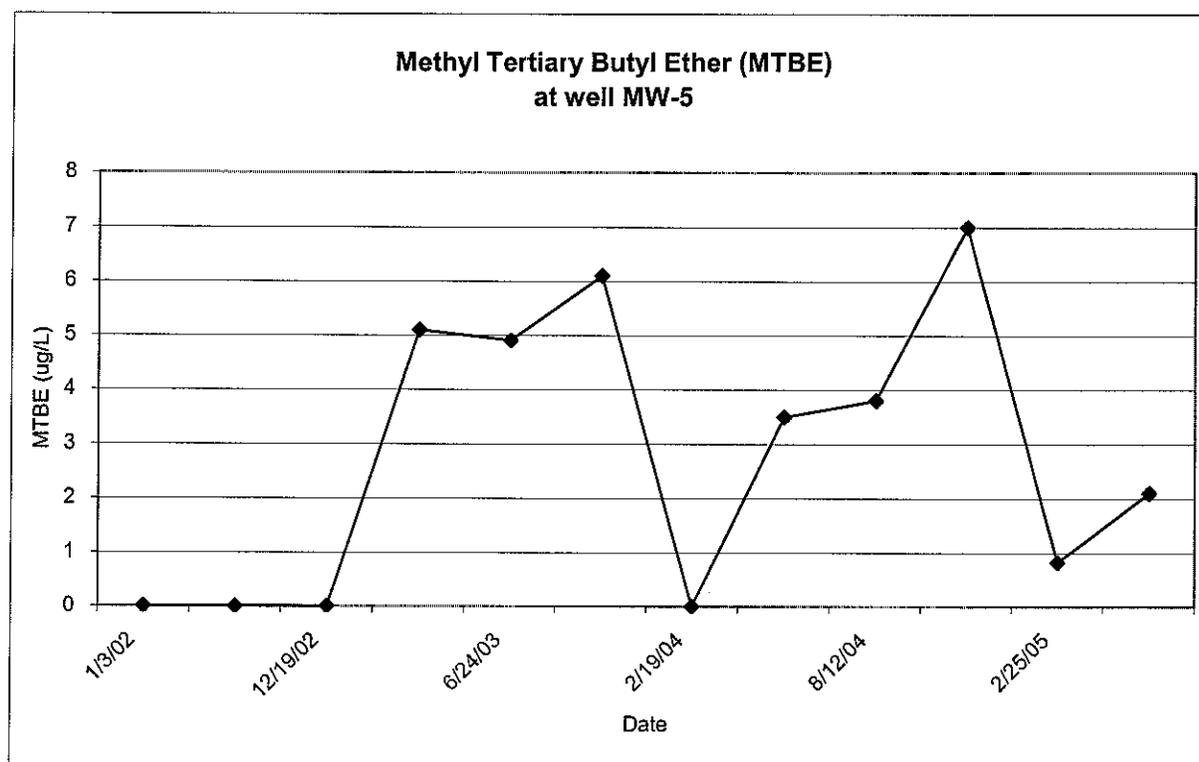
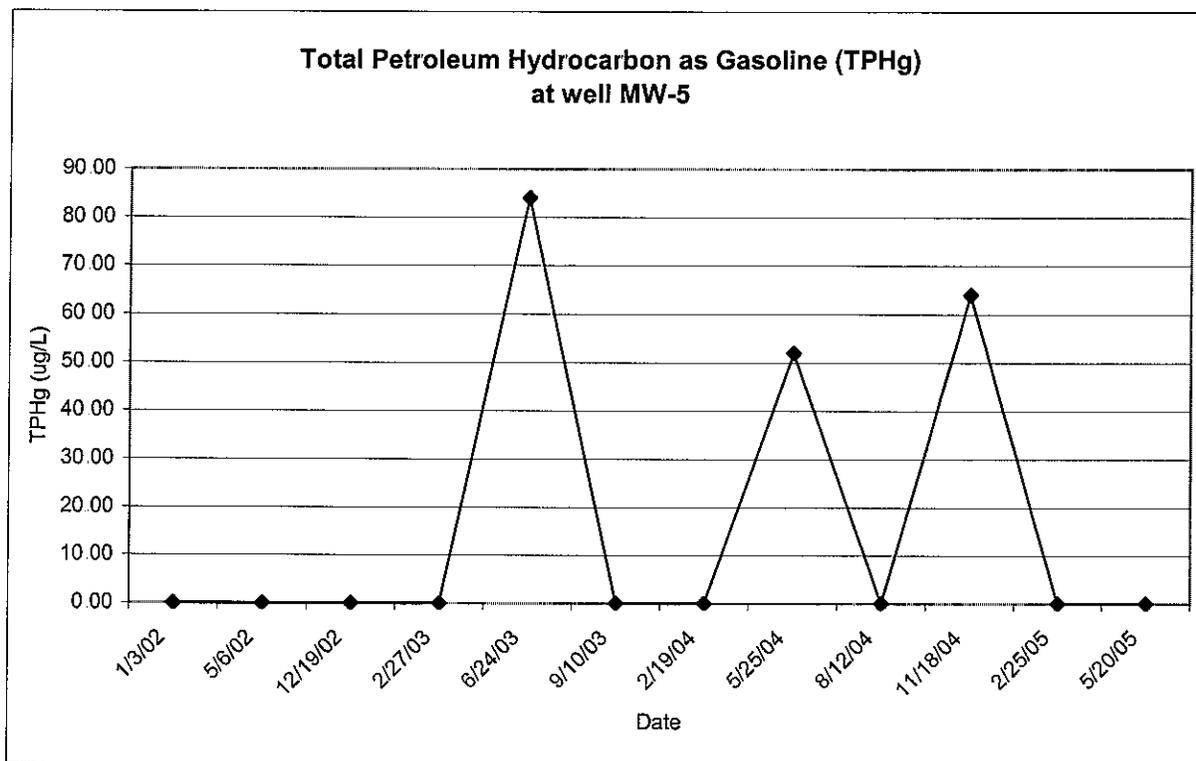
### **CONCENTRATION VERSUS TIME TRENT PLOTS**











**Methyl Tertiary Butyl Ether (MTBE)  
at well DW-1**

